

HANDBOOK
OF
EMERGENCIES AND COMMON
AILMENTS

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HANDBOOK
OF
EMERGENCIES
AND
COMMON AILMENTS.

EXPLAINING THE LATEST APPROVED TREATMENT OF IN-
JURIES, SUDDEN AND PAINFUL ATTACKS, POIS-
ONING, AND MANY COMMON DISEASES.

no ch
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TORS OF THE (MEDICAL) TIMES AND REGISTER, PHILADELPHIA,
TOGETHER WITH OTHER WRITERS ON
SPECIAL SUBJECTS.

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PREFACE.

The following pages have been written with the view of presenting to non-professional readers directions for the diagnosis and prompt treatment of a class of cases, such as the title-page sufficiently indicates. Several able and experienced physicians and surgeons, from different cities and parts of the country, have been selected to write upon subjects about which their line of study and practice has made them especially well informed, and for the further purpose of giving variety to the language and views expressed. Besides this, the latest medical authorities have been freely consulted, in writing parts of the book. It is believed that the suggestions for treatment herein found are in accord with the latest and best practice of the medical art.

The purpose of writing this book was partly suggested by these facts: Societies have been formed, of late, to give instructions in the prompt and proper treatment of persons injured or suddenly ill; railroad companies have put into the hands of employees books of

instruction in cases of emergency; several books have been recently published in New York and Philadelphia on these subjects; these books seem too meagre in the amount of information given, to be of the greatest benefit. The plan of this book has been to treat the subjects more fully and extensively, and to describe in sufficient detail the latest remedies and methods of treatment—such as are available and easily understood.

The science or art of medicine has no secrets which its practitioners seek to hide from the people, at least in these days of popular education; yet it is true that most persons are more easily deceived on the subject of medicine, than upon almost any other of like importance. The authors have endeavored, not only to point out specific remedies for different ailments, but to discuss and explain some of the general principles upon which a sensible practice of medicine is founded. It is believed that, if the book is carefully studied, and the directions intelligently followed, it will be found of real use, and in certain cases, a respectable substitute for a medical man, when one is not easily obtained.

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HANDBOOK OF EMERGENCIES AND Common Ailments.

PART I.

A FEW INTRODUCTORY REMARKS.

The majority of cases of sickness and injury are first treated, to some extent, by unprofessional hands, either properly or improperly. This must include a large class of cases of mild diseases and injuries, which are not considered sufficiently dangerous to require the expensive attendance of a physician, but which are treated by home-made skill, powerfully aided by that wise and inexpensive healer, Nature.

This may be called the common school of medicine as distinguished from such well-known schools or systems of medicine as the Allopathic, Homœopathic, Eclectic, and that last-born art of healing, Mind, Faith, or Christian Science Cure, with their more or less learned practitioners.

These common, diploma-less doctors outnumber by

hundreds those of any other school, for there is one or more in nearly every family.

All kinds of medicine which the house or neighborhood affords, patent and proprietary medicines, pills and herb drinks, and whatever friends and old women prescribe, besides many whimsical remedies that tradition has handed down, make up the *materia medica* used in this common school of practice.

That thousands of sick persons get well in time, if well nursed, when treated by "home talent" and simple medicines, cannot be denied.

Whatever may be said for or against domestic practice, it will continue to a greater or less extent by the necessity of circumstances, and it is of considerable importance. It seems desirable that it should come as near as possible to some scientific basis, and not be left to the control of superstition and ignorance.

When a doctor is in attendance on a patient his visits are brief, and sometimes, like angels' visits, infrequent; during all the remaining time the patient is left in charge of the family, who may, with ignorant management, undo all the good that his bitter medicine has accomplished.

As a kind of preparatory course of instruction for this large class of amateur doctors, we introduce here some general information and practical hints upon subjects which, as the writer has reasons to believe, are not well understood by the average person. Certain rules and general principles regarding the diagnosis and treatment of common diseases are not difficult to be understood by

any person of ordinary intelligence, and should be useful to those who undertake, from choice or necessity, to nurse and prescribe for the sick or injured.

We propose to call attention also to some excellent medicines and remedies which can be found in nearly every dwelling house, describe the virtues of each one, and point out the cases in which they will be found of great benefit when medicine is needed.

Some of these remedies are so important that they are largely relied upon by physicians and surgeons themselves, and are often the first called for in cases of injury and sudden sickness.

The Pulse.*—It is the practice among doctors to notice carefully the stroke of the patient's pulse as the first thing in the physical examination.

To examine the pulse, place the first two fingers on the inside and thumb side of the wrist, at which place, perhaps after a little searching, the beating artery may be felt. The pulse is owing to a wave of blood which is driven along the artery at each beat of the heart.

The natural pulse rate in a

Male adult is 65 to 80 a minute.

Female adult is 75 to 90 a minute.

Infant 6 months is 110 to 130 a minute.

Child 12 years is 85 to 100 a minute.

*According to experiments made in Paris, the pulse of a lion beats 40 times a minute; that of a tiger 96 times; of a tapir 44 times; of a horse 40 times; of a dog 52 times; of a fox 43 times; of a bear 38 times; of a monkey 48 times; of an eagle 160 times. It was impossible to determine the beatings of an elephant's pulse. It was discovered that a butterfly's pulse was 60 a minute.

Increased frequency of the pulse does not always indicate disease, but when acute inflammatory disease does exist the pulse is quickened. Exercise or excitement of any kind, and restlessness make the pulse unnaturally rapid.

In great debility and weakness from any cause, the pulse is also increased in its frequency; the more depressed the vital strength the higher the pulse rate becomes.

The strength or volume of the pulse is of more significance than its frequency. A strong pulse denotes that there is no failure at the heart, which is important, for in most fatal cases, the patient dies from heart failure.

A very strong, full or bounding pulse is found in the first stages of nearly all fevers, and acute and sthenic inflammatory diseases. If the case advances favorably the pulse will become softer and not so full.

A slow pulse is common in jaundice and apoplexy, in injuries to the brain and pressure upon it, in some diseases of the heart and liver, and in exposure to cold and wet. In some persons the pulse is always slow, 50 to 60.

The pulse may be irregular, that is, the beats may be unequal in strength or some beats may be left out, making the intermittent pulse.

An irregular and intermittent pulse in a person past the middle age, indicates that the heart is diseased, especially if the patient is short of breath on exercising. There are exceptions to this rule; for instance, in certain

cases of dyspepsia and nervous prostration, this kind of pulse is noticed. The patient's pulse is sometimes intermittent in brain disease, and after taking large doses of morphine. An irregular and intermittent pulse does not always indicate great danger from heart disease, for persons have lived many years having this kind of a pulse.

In most cases of apoplexy the pulse is full and bounding, and usually slow—valuable signs in confirming a diagnosis of the disease.

A pulse which is frequent and changeable in its rhythm, points out the probable existence of a disease of the heart or brain, or when noticed after protracted and wasting disease, it signifies that the patient is about to die from heart failure.

In nearly all the fevers the pulse is at first full and strong, and the increase in frequency keeps pace with the rise of temperature, but there is nothing very distinctive about this, for in a severe attack of a common cold or bronchitis, the pulse is almost equally full and strong at first. Local inflammation, if severe, may affect the pulse in a similar manner, that is, increase its fulness and frequency.

By the term "full pulse" we mean that the beat of the artery is large—that the artery is filled with blood at every beat of the heart; a pulse much more common in the young and robust, than in the old and feeble in health or disease.

A hard tense pulse denotes that the blood is being driven with unusual force through the arteries and gen-

erally means that active and violent inflammation is going on in some part of the body.

Just the opposite of this is the soft and compressible pulse which is found in low fevers and in debility, but when it follows the hard tense pulse it denotes that the crisis has passed and the patient on the road to recovery.

A very rapid, soft and compressible pulse in the late stages of acute or chronic diseases indicates great danger, if other unfavorable symptoms are present.

A small, tense and quick pulse, feeling like a small wire vibrating under the fingers, is very peculiar and sometimes met with in inflammation of the bowels and in peritonitis.

Excepting in some cases of sudden and violent death, the pulse of the dying becomes what is called a thready pulse, that is, it is very small, rapid, soft and compressible, feeling like a small thread feebly vibrating under the examining fingers.

The pulse of children is exceedingly variable ; fatigue, violent exercise, or mental excitement may make the pulse as rapid as it is in disease.

The Tongue.—It is the practice to examine the patient's tongue as well as the pulse. What information does its appearance afford? Some things regarding the nature, severity and progress of a disease.

Some persons in fair health have a furred tongue in the morning, which becomes cleaner before night; gen-

erally this indicates some unhealthy condition of the stomach or bowels.

In fevers and other diseases, if the coating is white, uniform, moist, and not very thick, it may be regarded as a favorable sign, but when the fur is thin, scanty and adhesive, allowing redness to appear through it, and inclined to become dry, the case will have a more unfavorable aspect.

The manner in which a furred tongue cleans is significant. When the coating slowly leaves the tip and edges, a healthy color appearing underneath and natural moisture returning, it may be known that the patient is improving; but when the fur loosens and separates in patches, beginning in the center or at the roots of the tongue, leaving a red, glossy appearance, convalescence will probably take place, but slowly.

In the diseases of aged people, a raw, dry and cracked looking tongue is of rather bad omen, and if in the later stages of the disease, canker also appears in the mouth and on the tongue, the case will be still more discouraging.

A pale tongue, if at the same time the skin, the lips and the lining membrane of the mouth are pale, indicates that the person is anæmic, that the blood is in a poor and watery condition, and deficient in red globules.

The tongue is dry in high fevers, in inflammations of the stomach and bowels, and in all very severe inflammations. It is a favorable sign, and generally signifies that

the crisis has passed, when, after this dry condition, it grows moist.

The strawberry tongue, so called, is peculiar to cases of scarlet fever. The tongue is often very red if inflammation attacks the throat, or in tonsillitis it is covered with a thick, creamy coat.

To sum up the manifestations afforded by the tongue which indicate danger are: tremulous action; dryness; a livid color; a very red, shining, or raw aspect; a marked fur or a heavy coating of a dark or black hue. Any change from these to a more natural look bears a favorable interpretation.

Respiration or Breathing is changed, to a greater or less extent, in different diseases and is a symptom of some significance.

Physicians in recording a case note the temperature, the pulse, and number of respirations a minute.

An adult in good health, when quiet, breaths from 16 to 20 times a minute. In all feverish conditions and in acute inflammatory disease, the breathing is increased in frequency, and as long as it is, the patient is not improving, but if it begins to fall towards the natural rate, convalescence may be expected. This is very noticeable in the ailments of children.

The breathing may be so slow and shallow in cases of narcotic poisoning, hysteria, trance, shock, poisoning from noxious gases, and in injuries of the brain, that an ordinary observer would think the patient was dead.

In cases of drowning, the breathing is so obstructed that artificial respiration is the only means of saving life.

There may be restrained breathing ; the patient makes an effort to hold back the breath, because it is painful ; this is noticed in pleurisy, peritonitis, etc.

Difficult breathing is called in technical language, dyspnœa, and is a conspicuous symptom in many diseases ; in asthma, tonsillitis, congestion of the lungs, suffocative catarrh, etc.

Shortness of breath in walking and going up stairs or any unusual effort is sometimes the first thing that calls one's attention to the fact that his health is below par.

It may point to anæmia, general debility, disease of the heart or chronic lung disease, etc., as the cause excepting in the case of corpulent persons who are naturally a little short of breath.

Delirium is a wandering of the mind. It occurs most frequently in those of a susceptible nervous system, and is consequently more common in the young. It is an alarming symptom to most persons inexperienced in sickness, but it is not necessarily of a bad meaning. Many mothers fear because their children are delirious that they have a disease of the brain. Such a fear is not generally well founded, for thousands of sick children are delirious with slight ailments.

Some adults are delirious at first with a common cold or some other mild disorder, but generally, if in adults,

delirium continues, it is a symptom that some serious disease exists, except in the hysterical.

Delirium is a conspicuous symptom in typhoid fever, but not common in pneumonia or lung fever but may be present. At the onset of nearly all high fevers and severe inflammatory diseases, more or less delirium is noticeable and is owing to the congestion or fulness of blood in the brain. This kind is transient. It is most common when the patient first wakes from sleep.

In nearly all diseases of the brain the patient is delirious.

Inflammation plays such an important part in the majority of diseases and injuries and is so often referred to in all medical books, that a little account of it will help the understanding of the reader.

Inflammation forms the chief source of danger in most serious diseases and injuries; the aim of treatment is generally to cure or to allay the inflammation of a part or of an organ.

Medical words are so formed as to make easy reference to it; for instance, bronchitis means an inflammation of the bronchial tubes, tonsillitis, an inflammation of the tonsils, gastritis, inflammation of the stomach (from *gaster*, the stomach), and that numerous class of medical words ending in "itis" generally means an inflammation of the part.

Just what inflammation is, nobody knows. The ancients thought it was fire because there was heat and

redness. The signs of inflammation seen externally are easily recognized ; they are four, viz : heat, redness, pain and swelling. There is always at first a congestion or a rush of blood to an inflamed part, which mostly accounts for these signs.

When inflammation is quite severe it produces fever-heat of the body, and the patient then has symptomatic fever, so called. There are four different ways in which inflammation of a part may result or terminate.

1. In recovery or resolution, to use the surgeon's word.
2. In abscess or suppuration.
3. In mortification or death of the part.
4. In death of the patient.

When recovery takes place, the inflammatory products are absorbed. If the inflammation continues to a certain extent the tissues soften and pus (or matter) is formed.

It is a well known fact to all surgeons that wounds are attended with more or less inflammation ; if quite mild it soon ends in resolution, if sufficiently severe it ends in suppuration or the formation of matter. Most running sores and ulcers are the results of previous inflammation.

The chronic form is a slow process which may last weeks ; the tissues sometimes become hardened, or what is called a cold or indolent abscess may form. In measles, scarlet fever, erysipelas and most of the humors or skin diseases, inflammation of the skin is a factor of the trouble. What is called catarrhal inflammation, signi-

fying an inflammation of the lining membranes of the body, the inner skin, makes a large number of diseases, such as nasal catarrh, gastritis, dysentery, inflammation of the bowels, catarrh of the kidneys and bladder, peritonitis, inflammation of the bile passage, (jaundice), pleurisy, sore throat, and so on.

It so happens that for the first treatment of external inflammation, nothing has yet been discovered which is so good as the common household remedy, very hot or ice cold water, which ever seems to agree best with the patient. It has a soothing effect upon the red and angry tissues and irritated nerves, thus preventing pain and swelling, and relieving the congestion. Poultices act on the same principle as hot water.

Symptoms and Signs of a Fever.—The following is a train of symptoms called the fever symptoms. In the forming stage there are premonitory symptoms lasting a longer or shorter time; there is great diversity about their duration. A sense of heaviness with yawning and stretching and a general feeling of discomfort which can not be referred to any particular part; the muscles feel tired and sore as if they had been pounded; there is often depression of spirits and disturbed sleep. The first real fever symptom is usually a chilly or shivering feeling, sometimes a real chill in adults. One or more convulsions in children sometimes take the place of a chill. During this chilly stage the skin is cold to the touch. “The **outer** parts freeze, while the inner burn.” In this

cold stage the pulse may be unnaturally slow. Heat, redness of the skin, and thirst soon follow these chilly sensations. The pulse becomes full and frequent; the breathing is hurried; there is headache, pain in the back and limbs. The tongue is furred. The urine is scanty and high colored and constipation as a rule exists. Generally there is entire loss of appetite, the patient wanting nothing but cold water.

Now-a-days doctors use a fever thermometer which accurately marks the degree of fever and depend less upon the patient's other symptoms in deciding whether he has a fever.

The natural temperature of the body is $98\ 1\text{-}2^{\circ}$ Fr.

Moderate fever heat is 100° to 103° Fr.

High fever heat is 104° to 106° Fr.

When the temperature continues 24 hours at 106° the patient is usually in imminent danger unless it is owing to malarial fever.

It should be remembered that although these are the fever symptoms they are not always followed by what we call a real fever, for instance, a severe cold, an inflammation of an internal organ or of some external part, and many other ailments are preceded by the same symptoms.

Each particular fever has its marks or signs by which it is distinguished. Typhoid fever comes on slowly, usually with diarrhœa, tenderness of the bowels, persistent headache, loss of appetite etc. Scarlet fever is sudden in its attack, beginning with vomiting, sore throat, high fever and at the end of 24 hours a scarlet rash appears.

Lung fever (pneumonia) is rather sudden in its onset, attended with a stitch pain in the side, some pressure for breath, cough, and raising rusty colored matter, perhaps. Thus these added symptoms are needed to decide what particular fever is threatened.

Children, even with slight ailments, are often feverish. A little indigestion, a slight cold, teething, irritation of the skin with a humor, constipation of the bowels, great fatigue, and many other causes easily bring on with them a rise of temperature and often a high fever.

Mothers and nurses who have had but little experience with sick children are often alarmed at such symptoms, and fear that the child is about to have a real fever.

Physicians sometimes gain great reputation in families from their success in "breaking up fevers," when they are only of this kind. Mother Nature is still more successful in such cases.

When fever signs and symptoms begin, it is good practice to give the patient either tincture of aconite, sweet spirits nitre or Dover's powder and hot herb drinks, put him in a warm bed and try to produce sweating. The pores of the skin seem to be safety valves for eliminating morbid materials. Undoubtedly many inflammatory attacks are cut short in this way. Modern treatment allows thirsty and fever-parched patients all the pure cold water to drink that they want, and it is thought that it is actually needed. In fevers the secretions are dried and water acts as a solvent and vehicle to remove dead and unhealthy materials from the system. Sponge baths

are of great benefit in cooling the skin and allaying the fever heat.

Pain.—The following is from Robert Burns's Address to the Toothache :

“My curse upon thy venom'd stang,
That shoots my tortur'd gums alang;
And thro' my lugs gies monie a twang,
Wi' gnawing vengeance;
Tearing my nerves wi' bitter pang,
Like racking engines!

When fevers burn, or ague freezes,
Rheumatics gnaw, or cholic squeezes;
Our neighbour's sympathy may ease us,
Wi' pitying moan;
But thee—thou hell o' a' diseases,
Aye mocks our groan!

O' a' the num'rous human dools,
Ill har'sts, daft bargains, cutty-stools,
Or worthy friends rak'd i' the mools,
Sad sight to see!

The tricks o' knaves, or fash o' fools,
Thou bear'st the gree.”

Since the first child screamed with colic-pain, or the first man groaned with a severe attack of facial neuralgia (*tic douloureux*), doctors and everybody else have been busy in trying to discover means of stopping pain or dis-ease. It was discovered many years ago that opium and its various preparations were precious and reliable agents in allaying insufferable pain, but it was reserved to the present century, as one of its marvelous achievements, to discover ether (1846) and chloroform

(1847), wonderful triumphs over pain! The modern practice of injecting medicine under the skin is a long step in advance of former methods as the effect is quicker and less medicine is required to stop pain.

Pain is the wail of an injured nerve, and it has a merciful mission, because it calls attention sharply to the fact that some part of the body is becoming disordered and endangered and needs looking after. Strictly speaking all pain is neuralgic. The word neuralgia means pain in a nerve. Where there is no nerve there cannot be pain. Pain results from an over irritation of a nerve, such as inflammation and pressure upon it, or an irritation of the nerve centers. It is seldom that pain alone is the immediate cause of death, but the loss of rest and food which it occasions is mischievous and exhausts the patients nervous force. There is a great difference in persons as regards their ability to bear pain. Pain may be dull or gnawing, and if so is generally constant; it is the pain of chronic rheumatism, chronic inflammation, and congestion. Acute or lancinating pain is a sharp and cutting pain, like that from a lancet, and is usually remittant; such is the pain of colic, neuralgia, gastralgia (pain in the stomach). Pain is also described, as darting, tearing, griping, stinging, burning, etc. We describe briefly the best common means of relieving pain. Moist heat has a remarkable soothing effect when the pain is not deep seated, and may be applied in the form of poultices or cloths wrung out of hot mustard water and frequently changed; nothing is better for common



WM. T. G. MORTON, M.D.

The discoverer of Ether as an anæsthetic; born in Berkshire county, Massachusetts, in the year 1819. The first public trial of Ether for a severe surgical operation was in the Mass. Gen. Hospital, Boston, in 1846. In the presence of many distinguished physicians, Dr. Morton, then a dentist, appeared and etherized the patient, and Dr. J. C. Warren performed the operation, the patient being unconscious and suffering no pain. The renowned surgeon remarked, "Gentlemen, this is no humbug." Ether is now used the world over, yet its discoverer never received a fitting reward. The honor of the discovery has been unsuccessfully contested by Drs. Wells and Jackson.

use. Dry heat often answers a good purpose especially in sciatica. In cases of pleurisy, some forms of neuralgia, etc., a mustard poultice, or other forms of counter irritation, such as spirits turpentine, ammonia, are good as external applications. A mixture of equal parts of tincture aconite, essence of peppermint and chloroform is rather a dangerous remedy for everybody to handle, but is one of the best in neuralgic pain. In case of children, paregoric is of great use in relieving pain. Its use will be fully described in the following pages. German and English physicians use the tincture of henbane (*hyoscyamus*) in the painful and spasmodic attacks of children. It is, perhaps, safer than paregoric in young infants, and is less constipating. It is kept by all druggists. A little peppermint or anise water relieves the small pains of children. In the severe attacks of pain in adults some preparation of opium is by far the most reliable internal medicine, but its indiscriminate use is somewhat dangerous in infants and aged persons. In such cases paregoric or Hoffman's Anodyne may be given, but in cases of intense pain, when a physician cannot be obtained, a Dover's powder or laudanum in proper doses may be given with safety to an adult. Quinine is a remarkable remedy for some cases of neuralgia (especially if it is periodical), and it is free from the dangers of opium.

Modes of Dying.—Dr. Oliver Wendell Holmes truthfully says :

“Time shall cut the last of all my earthly stitches.”

But Massinger in another poetical statement says.

“Death hath a thousand doors to let out life.”

This is hardly correct from a scientific standpoint, for there are only three ways in which we can die—three doors out of which life can walk. Death results either from :

1. Failure at the brain.
2. Failure at the lungs.
3. Failure of the heart.

First Mode.—When disease begins at the brain, or when it goes to it, the patient tends to die from what is called Coma, which means that he falls into a deep, unconscious stupor, from which he cannot be aroused, and in which he may die. The brain, the great nerve-center of the body, becomes paralyzed, and life comes to a standstill in consequence. Examples of this mode of death are apoplexy, poisoning from opium, morphine or other narcotics, injuries and diseases of the brain, and many other diseases.

Second Mode.—Death from the second cause results from a failure of the respiration, or breathing. In this mode it may be truly said that “the patient died for the want of breath ;” it is called in technical language death by Apnoea or Asphyxia. Examples of sudden death of this kind are choking, strangulation by drowning, suffocation from noxious gases, spasmodic croup, foreign bodies in the air passages, or any other cause which prevents air from entering the lungs. At first there is a violent effort to breathe, after which the face becomes

swollen and purple, the eyes protrude, the body soon becomes relaxed, and last of all, the heart fails. In such cases artificial respiration is the only treatment that will save life, unless the cause can be immediately removed. This operation is fully described on page 113. Gradual failure of the respiration is the cause of death in membranous croup, congestion of the lungs, and in other diseases of the lungs.

Third Mode.—Death from failure of the heart is the most common cause, and is called death by Asthenia, and results from a failure of the circulation of the blood. It may be sudden or gradual. Examples of sudden heart failure are found in diseases of the heart itself, in shock, fainting, profuse hemorrhage, lightning stroke, etc., etc.

Gradual heart failure, or failure of the circulation is the most common and natural termination of life in all chronic and wasting diseases; there is a gradual failure of strength, the pulse grows smaller, weaker, and more rapid, till the patient dies a quiet and painless death. It is in cases of failure of the circulation that stimulants of some kind are needed to keep the patient alive, to keep the heart from failing.

Signs of Approaching Death.—As it is often the case that the inexperienced are alarmed and think a person is dying when he is not, it will not be out of place to give here a few of the most reliable signs and symptoms that denote that death is nigh. They are

these : great feebleness and frequency of the pulse. or its absence in the wrist ; spasmodic or jerking breathing, except it is a case of hysteria. If profound Coma lasts more than twenty-four hours it will probably end in death. Loss of power over the bowels and bladder is a bad symptom, but not invariably followed by death. A collection of mucus or phlegm in the throat which the person makes no effort to raise, causes what is sometimes called "the death rattle." A tendency to slide down in the bed, a disposition to draw the arm towards the body when raised by any one. Difficulty in swallowing, coldness and lividity of the extremities, and a cold sweat upon the skin. What is called the Hippocratic countenance, so named because Hippocrates (4th century B. C.), the Father of Medicine, first described it, is a sign of inevitable death. The peculiar appearance of the face is this : great pallor, with a livid hue of the skin ; a pinched look of the nostrils ; the eyes and temples are sunken, and the lower jaw is dropped. The nose and ears become cold and moist. It may be said here that the talk about the "pangs of death" is not well founded on scientific grounds nor on common observation. The great majority of persons die quietly and without suffering. The nerves of feeling become paralyzed, and the senses of sight and hearing are in abeyance. The angel of death, as if in pity, blindfolds us, and renders us deaf and speechless, before leading us through the dark valley.

ARE DISEASES CURED WITHOUT MEDICINE?

From time to time in some quarters of the globe some medical reformer rises and proclaims that he has discovered a new art of curing all diseases without the use of medicines. Time and experience, which are the true tests of all such new things, have generally allowed such arts to die a natural death, and people have gone on taking medicine for awhile longer. The history of medicine gives account of many such discoveries, both in ancient and modern times. The art of healing with charms and amulets, popular and extensively practiced in former times was the longest-lived of anything of the kind. Curiously enough, the relics of this practice are recognized to-day, but only believed by the ignorant, such as wearing red strings around the neck to prevent nose bleed, and curing warts by rubbing them with beans, then throwing the beans into the northeast corner of a well.

A little less than 100 years ago, the treatment of diseases by the new art, Mesmerism, was popular in the great cities of Paris and London. Many physicians as well as others supported it. Mesmer, the inventor, was offered by the French government 20,000 livres at one time, as an annual pension to reveal the secrets of the method, which he refused. His practice soon fell into disrepute and Mesmer died in great obscurity in 1815. Of all successful modern medical juggleries, was that practiced in London by one Dr. James Graham about

the year 1780. He established "The Temple of Health," dedicated to Apollo, and its spacious and magnificent rooms became a place of fashionable resort. He claimed that the means of curing which he used were "the irresistible and salubrious influence of electricity or the elementary fire, air, magnetism, and the *Eternally Supreme Jehovah Himself*." This man called to his aid a certain kind of religious enthusiasm by inspiring his patients with it. He prepared in some way an "Elixir of Life"; anyone who took it might live as long as he wished; price £100 to be paid in advance. Over the doors of the principal rooms of his temple, and in the arches of the halls, were displayed the walking-sticks, crutches, ear-trumpets, eye-glasses, etc., left by his patients who had no further use for them. But the glory of Graham's art of healing died before its inventor.

Such is a brief account of a few of the most remarkable arts of curing diseases without medicine which have been practiced in former times.

The latest theory and practice in the art of healing is the "Christian Science Cure," which is attracting considerable attention in New England. Its pathology or doctrine of disease is entirely different from all others which have been advanced. It is founded upon metaphysics or mental philosophy, and not upon physics; it ignores in theory the existence of the material body, claiming that everything is mind, or spirit; that the body is only an image or ghost projected from the mind, and that it is consequently thinner and more unsub-

stantial than the Aurora Borealis which flits across the northern skies. The mind, being real, may be sick, but how can an image or a ghost be sick—this is the theory. There have been, without doubt, many cures performed by this new method, and there will be many more. There can be no doubt in the mind of any observant physician, that imagination or faith in the means used is a very important factor in curing a certain class of diseases. The old story of curing patients with “brown-bread pills,” the patient supposing them to be good medicine, is probably a true one, physicians, at least, believe it. A circumstance which recently happened strikingly illustrates the depressing influence the mind has over the body. A butcher in attempting to hang a piece of meat on a hook, slipped, and drew the hook into the arm and was suspended. He became pale and senseless, and was supposed to be dying; surgeons were called in great haste. His clothing was carefully removed to examine the arm, when it was found that the hook only grazed the skin, and had not torn the arm as the man imagined.

On the other hand, there is every reason to believe that there is strength, health-giving, and wondrous curative power in joy, expectation, and faith, and not only peace, but health in believing. There is another factor which, although invisible and intangible, is the most important agent in curing diseases, and one which underlies and makes apparently successful so many opposing methods of healing. This agent is *Vis Medicatrix*

Naturæ, the healing power of nature. This *Vis* is a powerful aid to the doctor whatever his name or nature. It revives the patient, spreads on the healing salve, and magnanimously allows him to carry off the credit of the cure. In estimating the apparent success of Faith Cure, Christian Science Cure, the cure by charms and incantations, the recuperative power of nature must always be credited with a certain amount of curative energy. Another generous ally in all arts of healing and the physician's invisible copartner is Dr. Quantum Sufficit Temporis (sufficient time). When other doctors fail, this one often cures the patient. Good nursing is another factor in the art of healing which deserves a conspicuous place among curative methods, and in many instances it is of more importance than medicine itself. Unless medicine is wisely selected and plainly needed the chances are better without medicine, and with good nursing. The error of relying entirely upon medicine, even if ignorantly prescribed, is common. Patent medicine is often relied upon and continuously taken for a long time in expectation of a cure, to the neglect of other important means. In many instances, diet, rest, a change of occupation or out-door exercise is needed more than medicine; yet, even under unfavorable conditions, health at last returns in fortunate cases. Every wise physician recognizes the fact that in the majority of diseased conditions there is a strong tendency to recovery; that unless some obstacle is in the way which nature cannot remove, the

patient marches on to convalescence in numerous cases. There are other important ways of curing diseases, such as those by Massage, Electricity, The Sweedish Movement Cure, Sea Voyages, Mountain Climbing, etc., etc.

Dr. Weir Mitchell has made himself famous by his methods of curing nervous diseases without the use of medicine. The tendency of later years, among sensible physicians is, not to follow the old cast-iron methods, but to divide patients into classes, and say this one needs medicine, this one does not. Yet experience and common sense assign to medicine a large place among the varied means of assisting nature to remove disease and to cure pain.

Patent Medicines.—"It is a balsam," answered Don Quixote, . . . "and all thou wilt have to do when thou seest me in some battle cleft asunder (as it frequently happens), is to take up fair and softly that part of my body which shall fall to the ground and with the greatest nicety, before the blood is congealed, place it upon the other half that shall remain in the saddle, taking especial care to make them tally exactly. Thou shalt then give me two draughts only of the balsam aforesaid, and instantly thou wilt see me become sounder than an apple."

The quantity of patent medicine consumed yearly in this country is something enormous. If the liquid could be poured into one channel it would make a respectable Niagara river, at least, in size. It is swallowed mostly by persons who are not severely sick, but by those who do not feel just right and think they need medicine, and try a bottle of it, thinking it may "hit the right spot."

If they get well in time, they credit the medicine with a cure. The fact generally is, that recovery takes place not on account of the nostrum swallowed, but in spite of it. One bottle is skilfully advertised to cure many different diseases. This would seem something like the man who, desiring to bring down some game, loaded up his shot gun, went into the woods where game was supposed to be, and blazed away at random, thinking he might hit something; if anything happened to be in the way, he probably would. According to the law of chances the result would be about the same in taking a bottle of patent medicine, loaded with a "scattering charge."

Sarsaparilla mixtures are popular patent medicines just now; what are the facts about their probable medicinal effects? Sarsaparilla itself, as a medicine, is uncertain and doubtful in its effect, and by many intelligent physicians, is considered inert. The other principal ingredient of these mixtures is doubtless the Iodide of Potassium. This is an excellent remedy in a few disorders in their particular stages and forms, such as asthma, chronic bronchitis, secondary syphilis, etc. With the exception of this very limited number of diseases, this medicine does more hurt than good, as in ordinary cases of weakness and debility, indigestion, etc. Instead of "purifying" the blood, it introduces into it a foreign substance which makes it impure, and nature struggles to eliminate or get rid of it. Such is the teaching of the most scientific physicians of to-day. For the

weak, anæmic, and poorly-fed person, nice, tender beef steak would be a hundred times better medicine.

The latest taking, preposterous "fad" is the "Microbe Killer." A shrewd truck-farmer, seeing his opportunity in the common talk among scientific men about the Germ Theory, adopted the dictum, "all diseases are caused by Microbes" (germs), puts up his "Killer" in jugs, at \$3 a jug, loaded with a sure cure for nearly all diseases. This mixture, it is said, is having a big sale all over the country. One writer says, "the inventor's factories will increase in numbers and his pocket-book in size, till his 'gulls' are educated out of their folly."

What are the facts about the Germ Theory of diseases? It is yet uncertain and obscure as to just what diseases are caused by Microbes. Scientific men, with eye-sight magnified a thousand times by means of the microscope, are peering into diseased tissues to find, if possible, these minute creatures; they are, to be sure, sometimes found, but whether the cause of disease, or the result of it, is not yet fully decided, and when it is, if ever, the discovery of a universal Germ or Microbe Killer will be an achievement of such brilliancy and magnitude that it will surpass that of Columbus in the discovery of the New World. Has this enterprising farmer discovered it?

We wish to keep truth and fairness on our side, and therefore we say that we do not condemn every patent and proprietary medicine as utterly worthless. There are probably some kinds, designed for some particular disorder, that may do good. It would be the best plan, if

a person is inclined to cure himself with these nostrums, to consult, in the first place, some skilful physician, and find out just what the disease is, for which he proposes to take medicine. It is undoubtedly true that the more one knows about the nature of disease and the means by which it is cured, if cured at all, and the more he learns about the composition of patent medicine, the less and less confidence he will have in its efficacy.

In the line of quack medicines we come to Quack Doctors. What is a quack doctor? In a standard medical dictionary which we have before us, "Quackery" is defined "mean or bad acts in physic," comprehending not only the absurd impostures of ignorant pretenders, but also unbecoming acts of professional men themselves. Webster defines a quack as a boastful pretender to medical skill. While it is true that there is more or less quackery among the "regulars," the term quack is mostly applied to ignorant pretenders to medical skill which they do not possess.

A little experiment was tried in the city of Boston in 1888, to test the skill and honesty of the quack doctors of modern Athens. Two reporters started out. Number One had a simple cold sore on his lip, which was touched a few times with nitric acid to keep it from healing too quickly. Number Two had nothing but a red spot on the lip, made by irritating it with nitric acid. Eighteen quacks were "consulted." In every case the sores were pronounced either cancers, cancerous humors, or sores that would lead to cancers—dangerous, and need-

ing immediate treatment, which would cost from \$15 to \$25 a week, and might require several weeks to cure.



Quack Doctor finds a Cancer where there is None.

These "cancers" healed in two days without treatment.

These are specimens of a very large class of "doctors" found in every large city. Their skill consists entirely

in their ability to deceive, humbug and cheat the patient out of money, and many of them drive a very prosperous business at it. Most of the travelling doctors belong to the same class. They stop at hotels for a few days, and advertise themselves as great specialists, and promise a sure cure in all cases. People are wise who avoid them.

A Medicine Case.—Every family, particularly every one living at a long distance from a drug shop, or from a doctor, should keep in the house a little box of medicines. The cost would be small, but the presence of such a supply might be the source of great comfort in such exigencies as are liable to arise.

A small tin or wooden box which can be locked, in which to keep the medicines, should be obtained, for in this way the vials are all in one place, and can be easily found when wanted. The supply should be bought of a reliable druggist, who will, if requested, plainly label each vial. For reasons, it is not best that the number of such medicines should be large. The following is a list of medicines which will be found most generally useful :

Syrup of Ipecac,	. . . . .	2 oz.
Paregoric,	. . . . .	2 “
Bromide of Potassium,	. . . . .	2 “
Laudanum (Tr. Opium),	. . . . .	2 “
Sweet Spirits of Nitre,	. . . . .	2 “
Sweet Tincture of Rhubarb,	. . . . .	2 “
Aromatic Spirits of Ammonia,	. . . . .	2 “
Vaseline or Cosmoline,	. . . . .	2 “
Carbolic Acid (Crystals),	. . . . .	2 “
Sulphate of Zinc,	. . . . .	2 “

The box should also contain one roll of Surgeons' Rubber Adhesive Plaster, one box of ground mustard.

Syrup of Ipecac.—For an emetic dose, a tablespoonful to an adult, in a cup of warm water, repeated every 15 minutes, till vomiting takes place. For a child, one teaspoonful, repeated if needed. This is a safe, but not very quick emetic. When a person has eaten something which gives great distress, spontaneous vomiting often takes place; when it does not, it should be encouraged by a dose of Ipecac, or something of the kind, assisted by copious drinks of tepid water. Convulsions in children are most frequently occasioned by undigested food. Syrup of Ipecac, enough to produce vomiting, generally puts an end to the trouble.

Spasmodic croup generally comes on during the first part of the night, and it is attended with some danger, and needs prompt treatment. A few doses of Ipecac, if in the house, is one of the best remedies known, generally effecting a cure. If something poisonous has been swallowed, large doses of Ipecac, given in considerable warm water, will empty the stomach, and may save life. The sulphate of zinc is quicker in its action, and on this account, better in cases of poisoning. In the summer complaint and dysentery of teething children, small doses of Ipecac, often repeated, is excellent treatment. Emetic doses of Ipecac sometimes relieves sick-headache and asthma. To "break up a cold" take teaspoonful doses of Syrup of Ipecac every hour, beginning as soon as

the cold is first felt, and for an adult 25 drops of laudanum at bed time ; retire early, and encourage sweating by large quantities of warm drinks.

Paregoric given in a little sweetened water is not disagreeable to the taste, and is a popular remedy for children ; much safer and better than the soothing syrups which contain large quantities of opium.

ORDINARY DOSE:

Three months old,	.	.	.	.	5 drops
One year old,	.	.	.	.	15 drops
Five years old,	.	.	.	.	20 drops
Ten years old,	.	.	.	.	30 drops

In colic-pain, pain and distress in the stomach, crying and restlessness from slight ailments, painful teething, Paregoric in proper doses, and repeated if needed, relieves the pain and quiets the excitement and irritability of the nervous system. It is probably true that it not only relieves pain, but that in many cases, through its power of allaying vascular and nervous irritability, it prevents or cures inflammatory diseases. Dry and irritable cough is benefited by a few small doses of Paregoric.

Generally speaking, it is a cure for the common diarrhœa of children, if first some mild physic, like castor oil or rhubarb, is given to clear the intestines of irritating substances. This medicine in one-half tablespoonful doses will often cure the milder forms of colic, as well as some forms of diarrhœa in adults.

Bromide of Potassium.—Dose 15 to 30 grains (1-4 to 1-3 teaspoonful) dissolved in much water. In wakefulness from over-excitement, mental over-work, anxiety and worry, producing, as they do, slight congestion of the brain, no medicine is better than this; it generally procures quiet and refreshing sleep; besides, it is a safe medicine in unprofessional hands.

In what is called congestive sick-headache, when there is flushed face, throbbing temples, intolerance of light and sound, the bromides have a wonderfully good effect.

In nervous attacks, “the fidgets and hysterics,” and in forms of great nervous excitement, the same remedy is called for. As a preventive of convulsions in children, it is often prescribed by physicians. When taken in large quantities and continued, no medicine so well controls epileptic fits. After blows upon the head, wounds of the scalp, and in other injuries, when the head is hot, and there is throbbing pain, no treatment is so good as cold water upon the head, and the Bromide of Potassium internally. It is said on good authority that spasmodic asthma is sometimes greatly relieved by this medicine. Whooping-cough is a spasmodic disease, and many physicians give Bromide of Potassium in sufficient amounts to control the severe spasms. The remedy is perfectly safe. The bromides are regarded as nervous tonics, or strengtheners in nervous conditions.

Laudanum—Tincture of Opium.—Opium is one of the most wonderful drugs ever discovered, first of

all in its power to relieve pain. While it is powerful for good, it is also powerful for harm. Infants and aged persons are susceptible to its ill effects, and its common use in unskilful hands is, by all means, to be discouraged. The danger is that the person might fall into a fatal stupor, when it is used in too large doses; yet, when there is reason to believe that it will be cautiously and intelligently used, it will make a valuable addition to the medicine box.

DOSE:					
Six months old,	.	.	.	.	2 drops
One year old,	.	.	.	.	4 "
Four years old,	.	.	.	.	6 "
Ten years old,	.	.	.	.	15 "
Twenty years old,	.	.	.	.	20 "
Adults,	.	.	.	.	30 "

A bottle of Laudanum should be plainly marked *Poison*, and never given internally except in the exigency of great pain, and then its use should be stopped immediately when the pain lessens. It may be said in a general way, that for all painful attacks or injuries, in robust and middle-aged persons, in such cases as colic, cholera-morbus, neuralgia, inflammation and stoppage of the bowels, dysentery, severe pain in the stomach, and so on, while the pain continues intense, a dose may be given every one half hour till it begins to yield. Laudanum in full doses is not always well borne on the stomach, often producing nausea and vomiting. In such cases, a few drops, two or three, may be given every few minutes till the required amount is taken.

In painful attacks, doctors often apply Laudanum externally ; it is often beneficial and not dangerous ; for any of the purposes for which the tincture of arnica is so often used externally, Laudanum, either clear or diluted with water, is much more effective. When in painful affections poultices are applied, Laudanum may be first poured upon them. Dover's powder, renowned almost the world over among physicians, is made principally from Opium and ipecac. A little of the syrup of ipecac and Laudanum combined has nearly the same good effect. It is of great value in the onset of nearly all feverish and painful attacks, such as severe colds, bronchitis, etc.

Sweet Spirits of Nitre.—Dose twenty drops to a teaspoonful. This is a well known medicine to most families. It is a mild and harmless remedy, yet has a good effect in mild cases. It may be given to children when they are feverish and restless. It has a cooling effect upon the skin, and when the patient is warmly covered in bed, after a few doses are given, it tends to moisten the skin with a gentle perspiration, which, in all feverish conditions, is beneficial. In some kinds of kidney and urinary affections, it may be taken with advantage ; the effect will be better when, at the same time, plentiful drinks of an infusion of cleavers, buchu, bear-berry leaves or some other herb drinks are taken.

Aromatic Tincture of Rhubarb.—Dose for a child two years old one teaspoonful. Besides being agreeable to the taste, and one of the best laxatives for children, (when a little soda is added,) it is a good corrective for the stomach and bowels. In the summer bowel complaints of children, when there is painful and frequent green stools, a laxative dose night and morning is one of the best remedies that can be prescribed; a few drops of paregoric may be added to prevent griping.

In cases of nausea, vomiting and colic pain, with either diarrhoea or constipation, a few doses of the Tincture of Rhubarb, with a little soda, will generally cure the trouble. Castor oil is often given to children. It acts quicker than Rhubarb, but it does not stimulate and remove unhealthy secretions from the stomach and bowels like the latter.

For these various disorders of the digestive organs so common with children, where gentle physic works such a wonderful change for the better, Rhubarb is the desirable kind. In older persons with disorders of the same nature as described above, the same treatment is beneficial. The dose of this form of Rhubarb for an adult is from one to two tablespoonfuls. With some persons it produces so much griping pain that something else is better. The simple Tincture has the same use but is not so agreeable to the taste of children.

Aromatic Spirits of Ammonia, in one half teaspoonful doses in much water, is a quick stimulant to the

action of the heart. The dose may be repeated every few minutes if required. In cases of alarming depression, shock, failing circulation, fainting, nervous failure, etc., it is a reliable stimulant. In any case seeming to need alcoholic stimulants, if they are not at hand, Spirits of Ammonia may be substituted. Some cases of acidity of the stomach, eructations of gas and distention of the bowels with gas are relieved as by magic with a few doses of the Spirits of Ammonia. In some cases of so-called bilious conditions, with constipation from scanty secretions of the intestinal juices, coated tongue and scanty and high colored urine, this medicine is called for.

Children and infants are often fretful on account of indigestion, and a sour or acid condition of the stomach. Small doses of Ammonia will often correct this condition.

Nervous headache from acidity of the stomach is sometimes cured quickly with a few doses of the Spirits of Ammonia. It is one of the very best remedies to apply for mosquito and other insect bites, and many surgeons recommend it for the bites of venomous serpents and rabid animals.

A person may sometimes be aroused from the stupor of narcotic poisoning by holding to the nose the Spirits, perhaps better by the use of Aqua Ammonia.

Cosmoline or Vaseline.—These substances are of the same nature and uses; they always remain of the same consistency, about that of jelly, and do not spoil or become rancid. They are now extensively used by

druggists in making all kinds of ointments. There is nothing better as a dressing for burns and wounds, especially when healing is taking place, when some mild and oily substance is needed to protect the surface from the air and from friction; for this purpose the carbolized preparations are the best. They are spread upon soft materials, and applied directly to the wound or burn. Slight wounds do well dressed in this way as soon as bleeding has stopped.

There is probably no one thing so certain to cure, or to improve the condition of old sores and foul ulcers, as the Iodoform Ointment which may be made from 10 parts Iodoform and 90 parts Cosmoline. For all purposes calling for a simple ointment, Cosmoline may be used.

Carbolic Acid is a good medicine to have in the house. It should be labelled *Poison*, as a precaution. It is a germ or microbe killer, and as such, prevents putrefaction in wounds; on this account, all extensive wounds should be drenched in a weak solution of it before dressing them; if used in this way, it is called an antiseptic. In washing and cleansing all wounds, foul sores and ulcers, a little of the solution should be added to the water.

A solution of Carbolic Acid is one of the best disinfectants in cases of contagious diseases, and will hereafter be noticed in this connection. For small burns and scalds, which housewives are constantly getting, a

mixture of equal parts of Carbolic Acid and cosmoline or glycerine smeared on the part a few times, is one of the very best cures. There is nothing known to the writer so prompt and certain to relieve intense itching of the skin as a mixture of one part of the Acid, and four parts of cosmoline or vaseline.

For further important uses of Carbolic Acid, see articles Mosquito Bites, Wounds, and Contagious Diseases. The Acid can be bought of druggists either in the form of the crystals, or the solution. To make the solution, having the Acid, add four teaspoonfuls to one pint of hot water.

Sulphate of Zinc (White Vitriol) should be kept principally as an emetic in cases of poisoning; it is the quickest and best in such emergencies, and is called for in all cases excepting when acrid or burning poisons have been swallowed, such as strong acids and alkalies. Dose of the Zinc, one half teaspoonful in a cup of warm water, repeated in ten minutes if vomiting is not provoked. Large drinks of tepid water assist its action. In all cases when a quick emetic is needed this may be given—in spasmodic croup, the convulsions of children from undigested food, etc.

Ground Mustard.—If in cases of poisoning an emetic is urgently needed, and nothing better is at hand, add two teaspoonfuls of Ground Mustard to a cup of

warm water, and give ; repeat the dose every ten minutes till vomiting takes place.

The mustard plaster is known to most persons. The plaster is called by doctors a “ counter irritant.” When there is pain or inflammation of any internal organ or part, neuralgia, colic, inflammation of the bowels, distress in the stomach, or obstinate vomiting, pleurisy or pain in the lungs, etc., a mustard plaster applied to the skin over the part may relieve the pain and help to cure the disorder. Ground Mustard is often added to hot water, out of which cloths are wrung ; it seems in cases of pain to increase the good effect.

To make a mustard plaster, mix the meal and equal parts of flour with warm water to the thickness of cream. Hot water drives off the volatile oil, and lessens its strength. Clear Mustard is too strong to give the best effects ; it cannot be kept on the skin long enough, and is apt to raise a blister, which is very painful and hard to heal. Some thin material, muslin or an old handkerchief, should be spread over the plaster before applying it. Children do not bear a mustard plaster very well. When Mustard is not at hand, cayenne pepper may be substituted, but mixed with three or four parts of flour. Spirits of turpentine poured upon flannels and applied, may also be substituted, and has nearly the same effect as Mustard.

WHAT MEDICINES ARE IN THE HOUSE.

Good housewife provides ere a sickness do come,
Of sundry good things in her house to have some.
Good *aqua composita*, and vinegar tart,
Rose water and treacle, to comfort thine heart;
Cold herbs in her garden, for agues that burn,
That over strong heat to good temper may turn.
Conserves of barberry, quinces and such,
With syrups, that easeth the sickly so much.
Get water of fumatory, liver to cool,
And others the like, else lie like a fool.

Thomas Tusser (London, 1557.)

In a sudden call for medicine, common household remedies sometimes constitute the only *Materia Medica* at hand, but, fortunately, many of these remedies found in the most humble dwelling house are of great importance, and may be just what are needed. It is well to know what they are, and what useful purposes they may serve.

Hot and Cold Water. At the head of the list of household remedies, water deserves a conspicuous place. No other common remedy is of such important and general use. It is said now-a-days that doctors use hot or cold water for everything. For external application, cloths wrung out of hot water, hot poultices or bags of herbs dipped in hot water, have about the same effect, which is owing to the moist heat which they contain; they soothe the fine, sensitive nerves of a painful part, and prevent congestion and inflammation to a considerable extent. In pain, redness and swelling of any external part, the application of hot water or poultices is usually called for. Of late it is thought by many physicians that ice-cold water is more effective in certain cases of inflammation. For painful bruises, lacerated or torn wounds, punctured and gun-shot wounds, nothing is better at first than the hot water dressing; it moderates inflammation, pain and swelling. Severe and painful sprains of any joint are best treated, at first, when they

are wrapped in flannels dipped in iced water, or, if much more agreeable to the feelings of the patient, the hot water may be substituted. Keep the part at perfect rest. In cases of broken bones or dislocations, when it requires a long time to get a surgeon to "set the bone," the part should be placed in a position the least painful, and wrapped in flannels wrung out of hot water, or in a bag of wormwood dipped in hot water. In injuries of the head, when there is heat and throbbing pain, and a full, strong pulse, ice-cold water to the head is by far the best treatment. In acute inflammation of the eyes, and in injuries of the eye, cloths dipped in cold water should be applied. For that dangerous accident, sun-stroke (heatstroke), when the head and the skin are burning hot, and the pulse strong and full, no remedy is worthy of mention compared with ice-cold water to the head and skin, or the cold douche.

In nearly all painful and inflammatory diseases of the bowels, the use of hot water or hot poultices is of unquestionable benefit. A very important, if not an essential part of the treatment of fevers, when the skin is hot and dry, and the pulse full and strong, is the cold sponge bath; it moderates the fever heat to a remarkable degree. The hip or sitz-bath is exceedingly beneficial in painful and inflammatory diseases of the urinary and other organs situated in the lower part of the body. Steam is a convenient and effective remedy for toothache and earache; see pages 193 and 196. In cases of severe constipation, or threatened stoppage, it should be remembered that copious and repeated injections of warm, soapy water, (with a little glycerine added if at hand), is a measure of almost the first importance as a safe and quick cure—better than the slow work of pills, especially for children. This is but a brief beginning of the long list of injuries, painful attacks, and other ailments, in the treatment of which hot or cold water is a convenient and effective remedy.

Poultices. From remote times down to the present, hot poultices of various kinds have been used as cura-

tive agents. As stated above, they have about the same effect as cloths wrung out of hot water, dependent upon the moist heat which they convey. Whenever hot cloths have been advised, hot poultices may be substituted, and are preferred when the supply of moist heat needs to be continuous for many hours; but in cases of very severe pain, as in colic, neuralgia, etc., thick, heavy flannels, wrung out of water as hot as can be borne, and renewed every few minutes, are decidedly better in controlling the pain, because they furnish heat of greater intensity. In the cases of external inflammation, hot poultices have the preference, as for instance, in abscesses, boils, carbuncles, etc. In the latter class of cases, laudanum poured upon the poultice increases the anodyne, or pain killing effect. When hot cloths are used, as in cases of colic, cholera morbus, neuralgia, pleurisy, etc., if a little ground mustard is added to the hot water, the anodyne effect is greater. The instances in which hot poultices are called for are too numerous to be described here. Flaxseed (linseed) meal stirred up in hot water makes an excellent poultice; so does ground slippery elm. If nothing else is at hand, a good poultice may be made of bread or crackers mixed up with hot milk till a mass of the proper consistency is formed. To prevent a poultice from sticking to the skin, a piece of oiled muslin may be first spread over it.

Ice. As indicated above, ice has its use when added to water to increase the degree of coldness. Pounded ice to swallow is beneficial, and very grateful to the patient in tonsillitis, diphtheria, inflammations of the throat and stomach; it will sometimes stop troublesome vomiting. In that case of danger, strangulated hernia, when the tumor is tense and painful, and cannot be returned at once, the application of a bag of pounded ice or of iced water, till the hernia can be reduced, is the best treatment that any non-professional person can undertake. An abscess may be lanced without pain by taking a small lamp chimney, inverting the small end upon the skin, then pouring into it a freezing mixture

composed of a little pounded ice mixed with an equal quantity of salt; in a few minutes the skin becomes white and nearly frozen, when the cutting may be done. In hemorrhage from the lungs, ice-cold water, applied to the front and upper part of the chest and to the back, is the most effective treatment.

Dry Heat, when applied to the skin, is a quick and powerful stimulant to the action of the heart. Death sometimes takes place from simple heart failure in cases of fevers, heart disease, poisoning, drowning, shock, etc., when it might possibly be prevented by keeping the flagging circulation agoing awhile by artificial heat. In all kinds of attacks when the extremities become cold, the circulation should be stimulated by dry heat applied to the skin. Neuralgia of the larger nerves, such as the sciatic, is relieved by the constant application of heat. Bags of hot sand or salt, or hot bricks, may be used, or any other convenient means of supplying constant heat to the part. Subacute rheumatism, neuralgia, toothache, earache, and many kinds of pain, are greatly relieved by dry heat. The good effect of hot steaming cloths and poultices is largely owing to the heat they convey to the painful part. An important means of restoring persons drowned, is the application of dry heat to the body; it stimulates the circulation, and often saves life, when assisted by artificial respiration. Persons of feeble health are often prevented from taking cold, after exposure to cold and dampness, by taking hot drinks, and heating their feet and legs for some time, before retiring.

Emetics. In cases of Poisoning, Croup, and in certain cases of Bronchitis in children, in over-eating, or eating food which disagrees with the person, producing great distress, or cramp-like pain in the stomach, an emetic may be urgently needed, so much so that it might possibly save life. What things are in the house that will act as emetics? The simplest is luke-warm water. It needs to be taken in large quantities—let a person drink all he can hold, and, in an emergency, thrust his finger down his throat to provoke its quick

action. A tablespoonful of ground mustard added to a pint of warm water makes an excellent emetic. A teaspoonful of powdered alum in warm water acts as an emetic. Two teaspoonfuls of fine salt taken in a pint of tepid water generally produces vomiting. In poisoning, to induce immediate vomiting is the plain and essential thing to be done, excepting in poisoning by caustic acids and alkalies, (in which cases an emetic would be harmful), and excepting cases in which spontaneous and free vomiting takes place. It is unquestionably true, that in children, a threatened attack of bronchitis, cold in the head, tonsillitis, croup, etc., can be, in many instances, cut short or altogether prevented, by giving at the very first one or more emetics. It acts upon the skin, promotes perspiration and other secretions, and has a decided and curative effect. The syrup of Ipecac is the best for children. Hive syrup, or the syrup of Ipecac should always be kept in the house where there are children for the prompt treatment of croup and bronchitis.

Spirits of Turpentine. There is the highest authority for saying that this medicine is one of the best remedies for the treatment of diphtheria, and for the prevention of its spreading by contagion to other persons in the house. It is certainly known to be a powerful germ-destroyer, and as diphtheria is a germ-disease there is reason for its use. Full directions about the methods of using it will be found under the subject Diphtheria in this book. Turpentine has long been used for checking hemorrhage from internal organs, such as the lungs, stomach, intestines, nose, etc. It may be given in one-half teaspoonful doses stirred up with the white of an egg, or in milk; and repeated every one-half hour if required. Turpentine stupes are much used as an external application in treating inflammations of internal organs, such as inflammation of the bowels, pleurisy, gastritis, etc. Pieces of flannel large enough to cover the inflamed or painful part are wrung out of hot water, then a few drops of turpentine (8 or

10) are sprinkled on and applied, taking care that no blistering is produced. The same application is used for neuralgia, painful rheumatic joints, muscular rheumatism, lumbago, etc.

In nearly all cases where a mustard draught is recommended, turpentine stupes may be substituted. Burns have been successfully treated by covering the burnt skin thickly with a mixture of vaseline, or mutton tallow, and a little turpentine. In many cases of flatulent dyspepsia, and intestinal catarrh, a few drops of turpentine (5 or 6) taken on a little sugar, acts wonderfully well. We often hear it said that turpentine is "weakening"; the contrary is true; it is a certain stimulant to a weak heart, and failing circulation.

Ground Mustard. For the medical uses of this common household condiment, see page 45.

Cayenne Pepper (Capsicum) and *Jamaica Ginger*. Seventy-five years ago, botanic doctors relied upon cayenne pepper as one of their principal medicines. When for any purpose a stimulant is needed one-half teaspoonful of Cayenne, mixed with warm, sugared water and milk, may be taken. For the sluggish and painful digestion of atonic dyspepsia, for mild attacks of colic, and cramp in the stomach, it acts well. There is good reason for saying that Cayenne in sufficient quantity will prevent an attack of delirium tremens. For the indigestion of hard drinkers, Capsicum is very beneficial. It will often break up a distressing attack of hiccough. It may be substituted for ground mustard in its use as a counter irritant.

Jamaica Ginger has nearly the same effect as Capsicum, but is less powerful. Ginger is certainly a most excellent remedy in cases of slight indigestion and distress in the stomach after eating. It forms the principal active ingredient of a popular medicine sold under the name, Bismuth Mixture. When ginger is needed as a stomach corrective the effect is better if a little soda is combined.

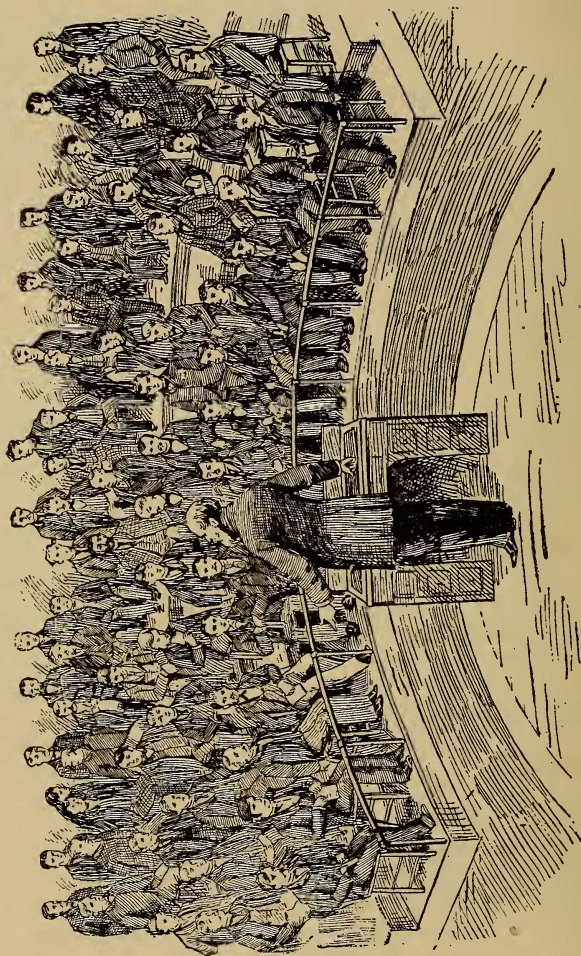
Coffee is stimulant to the nervous system and to the

action of the heart. As a medicine it is very often given as an antidote for morphine, laudanum and opium poisoning; as such it is a convenient remedy, nearly always at hand. In cases of an over dose of an opiate of any kind, strong coffee without milk or sugar should always be given after an emetic has emptied the stomach. In cases of great weakness and a tendency to failure of the heart's action, it may be given as a stimulant, when nothing better is at hand. Coffee relieves some kinds of headache, especially the headache following drunkenness. Tea has about the same effect as a medicine as coffee.

Kitchen Antidotes. It must not be forgotten, in a sudden call upon the resources of the house in cases of poisoning, that there are valuable antidotes in the kitchen, such as mustard, salt, warm water, the whites of eggs, oil or lard, coffee and tea, soda, chalk, magnesia, vinegar, whitewash scraped from the plastering, charcoal, etc. For the particular cases in which one or another of these is called for, see page 154.

Bi-carbonate of Soda. Common cooking soda, in the treatment of superficial burns and scalds, has a remarkable effect in relieving the pain, and in "drawing out the fire," to use a common expression. It may be dusted thickly onto the skin, or mixed with water into a thick paste and applied, or cloths wrung out of cold water in which soda has been dissolved, may be used.

Epsom Salts, commonly called "salts," is an excellent medicine, but to some persons its taste is very disagreeable. Its action is quicker and generally better than that of pills. A full dose is a tablespoonful dissolved in water; if a little ginger is added it improves the taste and its effect. If the dose is taken just before eating it acts more rapidly as a cathartic. In cases of habitual constipation, one or two teaspoonfuls taken before breakfast every morning generally effects a cure.



A PROFESSOR LECTURING ON THE SUBJECT OF SHOCK

PART II.
INJURIES.

SHOCK OR COLLAPSE.

ALL severe injuries are immediately followed by a condition which, in expressive and surgical language, is called Shock. In the language of the street, the person after receiving such an injury is said to be faint or stunned.

Shock is a sudden depression of the nervous system, in consequence of which the action of the heart and the act of breathing are weakened, or may be brought to a standstill. When shock is severe, it is the first thing to claim the attention of the impromptu surgeon. In mild cases the person looks pale and seems faint; but it is only transient, and he soon rallies. When shock is very severe, the face and the skin generally become deathly pale and cool, and are bathed in perspiration; the eyes are dull and motionless; the breathing is slow and sighing; the pulse at the wrist may be imperceptible, very weak, or rapid; consciousness is not generally lost. If the patient rallies from this critical condition, nausea and vomiting usually occur, which are consequently regarded as favorable signs. Fright, the thought of a surgical operation, any powerful mental impression, the sight of blood,

severe pain, and many other causes, are sufficient to bring on a condition of shock in persons of a sensitive nervous system. Shock in its severest form follows gunshot wounds, railroad injuries, and injuries attended with great loss of blood, crushing of limbs, penetrating wounds of the abdomen and chest, and blows upon the head and upon the pit of the stomach.

There is a great difference in persons in their ability to bear injuries or pain. In some a slight wound or accident is followed by severe shock. The aged rally more slowly from shock, but do not show its effects so quickly. Drunkards bear a shock poorly; they either die, or may fall into *delirium tremens* in case the injury is severe.

Treatment: Something must be done, and some things must not be done, or the injured may die simply from the Shock of an injury. But few persons outside the medical profession are aware of the danger which threatens the patient from this direction. The patient should immediately recline with his head quite low. The first thing to do is to restore the failing circulation of the blood, and strengthen and keep a-going the act of breathing. Fortunately, one of the best and most effectual remedies is usually at hand; namely, dry heat. This has an immediate and stimulating effect on the circulation. When the patient's skin is pale and clammy, his pulse very weak or imperceptible at the wrist, his face haggard and eyelids drooping, the immediate application of external heat is the first and plainest thing to be done. Bottles or cans of hot water, heated flannels, hot soap-

stones or bricks properly wrapped should be placed around the body, or any other convenient means of restoring warmth to the body may be employed. If at hand, and the patient can swallow, a small quantity of stimulating drink may be given, but not too much, for it would be positively harmful. Strong coffee or tea is better than nothing. A few drops of spirits of camphor in sweetened water, or half-teaspoonful doses of aromatic spirits of ammonia in sweetened water, would be of benefit. There are many cases of shock without loss of blood, but when hemorrhage is one of the causes, the case is one of great danger, and care must be taken not to move the person too soon for fear of a return of the bleeding and fatal results from Collapse.

A surgeon of high authority states that Shock is the most common cause of death occurring soon after an injury; from this we can see the importance of prompt and well-directed treatment, and that people should understand just what should be done.

TRANSPORTATION OF INJURED PERSONS.

Large cities maintain ambulance services for moving the injured to their homes or to hospitals; in country towns some improvised method must be devised and carried out, often by those inexperienced in such work. Of course the principal thing is to move the patient with



as little harm or suffering as possible, and when bones are broken, to prevent further displacement or injury. We offer a few practical hints on this subject.

1. If the patient is conscious and able to walk, assistance may be given if he puts his arms over the shoulders and around the necks of two persons, one on either side.
2. If he cannot walk he may be carried by two assist-

ants in the manner illustrated in the above cut, from Dr. Dulles' work on Emergencies.

3. An improvised stretcher, such as a window-shutter, door, a board, or two poles passed through coats, the coats being buttoned, may be used. Stout blankets, shawls, or mattresses make good stretchers. Ingenuity will suggest at the time and on the spot other means, when any of these are not at hand. It is not generally best to put a person severely injured into a high carriage unless the distance he must be carried is very long. It is better to transport him on stretchers.

4. If you are alone, and it is necessary to move an unconscious person immediately, as for instance one suffocated with smoke, raise the person to a sitting posture, place your right shoulder against the lower part of his abdomen, grasping with your right arm his thighs just above the knees, then rise, allowing the patient's head and trunk to hang down over your back, balancing the body with your right arm.

In case of broken bones, before attempting to move a patient, if it is thought the bones of the arm or leg are broken, temporary splints should be applied to prevent further injury. Such splints may be put on over the clothing, and may be made of anything at hand, such as a thin and narrow piece of a box cover, any stick, a cane, etc. The limb should be straightened by a little traction, the splint placed on and held in position by tying handkerchiefs or strips of cloth around, or if nothing else is at hand, the lining from a coat torn into strips.

Whatever is used, the splint must be firmly bound on in several places to prevent any bending or motion of the broken limb. When one leg is broken or crushed, it is advised that it be bound firmly to the well leg, which then acts as a splint.

It should be remembered that there is danger in moving patients too soon after severe hemorrhage from wounds, or from other causes. Proper time should be allowed for firm clotting to take place in the arteries. When the hemorrhage is only slight the danger is nothing. If it is necessary to move a person who is very sick and weak from one room to another, it can be easily and safely done by allowing the patient to remain in a reclining position, and carrying him on stout blankets or on a mattress. This needs four assistants. In cases of shock and apparent death, valuable time must not be lost in moving the patient from one place to another before attempts at restoration are made. Artificial respiration should be tried, and other restoratives, such as warmth and stimulants used, if at hand. The critical time in which life could be saved might pass while stopping to transport the patient to his home or to a hospital.

HEMORRHAGE OR BLEEDING FROM WOUNDS.

HOW TO STOP IT.

Profuse bleeding from wounds, in case one of the larger arteries of the leg or arm, for instance, has been cut or injured, is one of the alarming and dangerous accidents of life. Of course in severe cases a messenger will be sent for a surgeon, but unless some one with a cool head immediately undertakes well directed means of checking the hemorrhage, the surgeon may find on his arrival that the pale messenger of death has preceded him.

In studying the treatment of hemorrhage from wounds, it should be thoroughly understood in the first place that the bleeding may be from three different sources : *

1. From wounded arteries.
2. From wounded veins.
3. From wounded capillaries.

1. When bleeding proceeds from wounded arteries, it leaps out of the wound in interrupted crimson jets, or wells up at each beat of the heart.

2. When from the veins, it flows in steady and darker colored currents.

3. When from the capillaries, there is oozing of blood from the wounded surfaces. In ordinary wounds the

* The course of the circulation of the blood is this: the heart, situated in the left side of the chest, acts as a force-pump and propels the blood through the strong tube-like arteries to every part of the body; in the tissues minute arteries intermingle with minute veins which form the capillary circulation; the blood returns slowly to the right chamber of the heart through the veins.

bleeding comes from all three sources. Bleeding from arteries is the most dangerous because the blood is forced through the arteries at each beat of the heart, which acts on the principle of a force-pump.

More blood can be lost without a fatal result than is generally supposed. In a person weighing 150 lbs. there are from 14 to 16 pints of blood. One pint caught on cloths or mixed with water seems a large amount, and bystanders are apt to say the person has lost nearly all his blood. In some cases nearly one-half the blood can be lost and the patient rally, but not generally.

If the face, lips, ears and skin generally are pale, and bathed in cold sweat; if the countenance is vacant and the pupils dilated; and if the person complains of a thick mist before the eyes, with flashes of light, and hears roaring or humming noises, and faints; if the breathing becomes sighing and the voice small and whispering, the pulse quick, fluttering or imperceptible at the wrist, the patient is in great peril, though it is possible he may rally. A person in this condition should not, in any event, be quickly raised to a sitting or standing position; there would be great danger of death from fainting or heart failure. The principal ways and means of stopping bleeding from wounds are as follows:

1. Capillary hemorrhage soon stops of itself.
2. Bleeding from large wounded veins may require treatment, but the case is much less urgent than that from arteries. The veins carry blood to the heart, and are supplied with valves which allow the blood to flow only

in one direction. The current is slow and flows out of the wound in a steady stream and not in jets. Pressure upon the edges of the wound stops this kind of bleeding, because when the walls of these vessels are pressed together the blood cannot flow through and clotting soon takes place. A compress, which is a piece of folded cloth tightly bound down with a bandage, will generally control this hemorrhage.

3. Arterial hemorrhage is by far the most rapid and dangerous kind of bleeding in case large arteries have been wounded. It is easily known from the other forms by noticing that the blood comes in jets at each beat of the heart, and that it is bright red in color, compared with venous blood in the wound. The following are the different ways of controlling it.

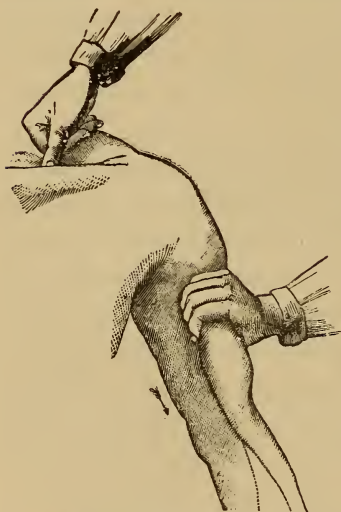
a. In ordinary wounds in which the smaller arteries only are cut, if the bleeding is troublesome, cold water or iced-water poured upon the wound is the best means of checking it. Hot water, as hot as the hand can bear— 115° to 125° —has about the same effect, and is often used by surgeons. Tepid water increases the hemorrhage.

b. When the bleeding is profuse, until other means can be used make firm pressure with the fingers and thumbs on each side of the wound, the same as one would pinch together the end of a rubber tube to prevent water from running through it. This closes the ends of bleeding arteries.

c. A *Spanish Windlass* may be used in this way: tie a hard knot in a handkerchief, suspender or cord, then tie

to loosely around the limb *above* the wound ; slip a stick through the loop and twist it round and round, keeping the knot over the bleeding artery. This operation has saved many lives. It acts on the same principle as the *tourniquet* which surgeons use.

d. Firm pressure with the fingers down upon the bleeding artery *above* the wound is a ready and natural way of checking profuse arterial hemorrhage from wounds in the limbs. The main artery of the leg passes down on the inside of the thigh, and that of the arm, on the inside of it. With the fingers search for these arteries,



known by their beating, then press them firmly against the bone of the thigh or arm ; this closes the walls of the artery so that the blood cannot flow out. The limb should be elevated above the body in all cases, for it somewhat lessens the force of the blood pressure. Some distinguished surgeon has said that he did not fear hemorrhage from an ar-

tery that he could lay his finger upon. This method is illustrated in the accompanying cuts, the dotted lines representing the line of the arteries.

e. It must be remembered that nothing is absolutely safe till a ligature (a thread) is tied around the end of the bleeding artery, if it is a large one. Perhaps it is hardly to be expected that any non-medical person would undertake an operation of this kind, but one might in a great emergency, and to save life, as it is not difficult in itself. In a large wound the end of the artery can



be seen, looking like the end of a whip-cord; seize it with a pair of tweezers or with a wire bent up, pull it out and tie a silk or linen thread firmly around it.

Pressure upon the artery to stop hemorrhage.

Styptics or astringent substances used locally to stop bleeding are sometimes useful in the smaller wounds, but not safe when large arteries are wounded. The most reliable styptics are alum, perchloride of iron, mat-tico, tannin and vinegar. Lint or absorbent cotton bound onto the wound helps to stop the bleeding and to clot the blood in small wounds.

Summary.—The distinction between bleeding from arteries and that from veins should be remembered. In

ordinary small wounds the hemorrhage stops in a brief time ; if not, a little lint tightly bound on with a bandage, or a little ice-water or hot water poured upon the wound is sufficient to control it. In large and deep wounds in which large arteries are cut off the treatment must be different ; pressure, either directly upon the edges of the wound or upon the bleeding artery *above* the wound, with the fingers or with an improvised *tourniquet* (handkerchief or cord twisted down upon the limb) is an effectual way, generally, of staying the flow. If it does not, the bleeding artery must be tied or ligated. Bleeding from veins is usually easily controlled by pressure with the fingers upon the edges of the wound, or by binding a compress tightly on with a bandage. It must be remembered that after the bleeding is checked the part must not be moved for fear of starting it afresh.

WOUNDS.

THEIR MODERN TREATMENT.

Surgeons recognize only two principal ways* in which all wounds heal, namely :

1. Healing by primary union or by first intention.
2. Healing by second intention or by granulation.

1. Healing by *first intention* takes place only when the wound is a clean cut and when its sides and edges are brought close together and kept so. The wound must be free from large clots of blood, or other foreign substances. It is the quickest way in which wounds can heal. Nature throws out from the fresh-cut surfaces a plastic material which glues them together in one or two days, leaving only a small scar.

2. Healing by *second intention* or by *granulation*. This is the process nature takes when a wound is left to gape or when the flesh is torn or partly destroyed. It means that new flesh is filled in particle by particle. It is a slow process ; suppuration takes place and a large scar remains, but by necessity it is the only way in which many wounds can heal. If a torn wound or a deep burn is examined while healing, the small red granulations can be easily seen ; when the granulations are overabundant they are called “proud flesh.” Most

* Two other ways are sometimes described, namely : healing by Immediate Union, and healing by Scabbing. These are so rare that they are of no practical importance.

persons think that some healing salve, balsam, liniment or wash is required to *make* a wound heal, but nature must heal all wounds when they heal at all. The artful hand of man can only furnish the favoring conditions.

The true doctrine of the healing of wounds is quaintly expressed by that great quack doctor, Paracelsus, in his "Great Surgery," printed in the year 1536.

"Warily must the surgeon take heed not to remove or interfere with nature's balsam, but protect and defend it in its working and virtue. It is the nature of flesh to possess in itself an innate balsam which healeth wounds. . . . Inasmuch as flesh forms from within outwards, and not from without inwards, so the surgery of wounds is a mere defensive to protect nature from suffering any accident from without, in order that she may proceed unchecked in her operations."

The most popular modern treatment of wounds at the present time is called

The Antiseptic Method.—This is founded on the belief that the air contains germs which are poisonous to all wounds. These germs, called by scientific men *bacteria*, are not visible to the naked eye, but are visible through the powerful eye of the microscope; on this account they are often called *Micro-organisms*. When these minute living things find a lodgement in a wound, they increase rapidly in numbers, induce putrefaction and prevent the wound from healing so kindly as it otherwise might. These invisible germs not only float in the air, but they cling to the hands, to old

sponges and rags, to instruments and to other things used about a wound, and thus get into it.

It has been discovered that certain substances have the power of killing or rendering inactive these poisonous germs, thus preventing putrefaction or blood poisoning, and favoring the natural and more rapid healing of wounds. Such substances are called Antiseptics. Among these are *Corrosive Sublimate*, *Carbolic Acid*, *Iodoform*, *Alcohol*, *Sulphur*, *Borax*, *Common Salt* and *Vinegar*.

Corrosive Sublimate is extensively used by surgeons as an antiseptic, but it is too poisonous for everybody to use.

A solution of *Carbolic Acid* is an excellent antiseptic for ordinary use in the family. *Alcohol*, with one or two parts of water, is an antiseptic.

Sulphur is considered by many one of the best agents of this class.

Iodoform, which comes in the form of a yellow powder, is a new antiseptic which surgeons in hospitals and in private practice are using the world over. It possesses wonderful powers in curing foul ulcers and old sores principally on account of its germ destroying property. It is dusted upon wounds or sores and covered with lint; or an ointment may be made by mixing it with cosmoline or vaseline.

Powdered Borax.—Dissolve two teaspoonfuls in a cup of water. This may be used when nothing better is at hand.

The aim of this method is to keep the wound, from the

first, absolutely free from these micro-organisms or germs. The practical part of it can be carried out by cleansing wounds before dressing them with some one of these solutions above named.

It may be said in a general way that the most important thing in the treatment of cuts, after stopping the bleeding, is to cleanse the wound thoroughly with some antiseptic solution, then bring its sides and lips close together and hold them in place with strips of adhesive plaster or stitches, and a bandage, and to keep the part at perfect rest.

Large lacerated or torn wounds are best treated at first with the hot water dressing. Nothing has yet been found which so well prevents undue inflammation and the attending pain and swelling. Antiseptic precaution should be taken. For trivial wounds carbolyzed vaseline or cosmoline makes a good dressing, for it protects the wound from the air, friction, and dirt. A little adhesive plaster is all that is needed in many cases.

For the sake of convenience in description, surgeons divide wounds into *Incised*, *Lacerated*, *Punctured*, *Gun-shot* and *Poisoned*.

Incised Wounds or Cuts are those made with sharp instruments. When properly treated they are the best wounds to heal. Of course they vary in size from a trivial cut to a most formidable looking wound, but in the latter case one should not despair of undertaking the first and proper treatment in the absence of a surgeon.

Treatment.—Small cuts are best treated—after the hemorrhage is stopped—by drawing the wound close together with adhesive plaster, if it is at hand ; if not, dress with cosmoline or any simple salve to protect from dirt and friction. Before dressing large wounds, cleanse with some antiseptic solution such as carbolic acid ; next draw the sides together and keep them so with the best means at hand. Surgeons' adhesive plaster, cut into long, narrow strips, is well adapted to hold the sides of a wound in apposition. The accompanying figure illustrates the manner of applying the plaster-strips.



Proper manner of applying Adhesive Plaster to a large cut.

First, firmly place one end of a strip on one side of the wound, draw the wound together, then stick the other end down, and so on till all the strips are fixed firmly in place, being sure to leave a little space between them for the escape of discharges. Most persons who have not been instructed in this matter stick on a large piece of the plaster, completely covering the wound ; a few drops of blood escaping loosen the plaster and leave the wound

gaping. A piece of soft cloth or lint may be placed over the plasters, and then a bandage so applied as to help in keeping the wound pressed together. The strips may be removed the third day. Moisten them with warm soapy water, and pull each end towards the wound. After the plasters are removed, cosmoline, vaseline or even mutton tallow makes a good dressing, when applied on a soft cloth, to prevent friction and injury to the healing wound. What shall be done if adhesive plaster cannot be obtained? If the wound is large and gapes, some one with a little courage should be found who will take a few stitches to close it. A common needle with silk or linen thread will do. If it cannot be sewed up, a bandage may, sometimes, be so applied as to close the wound, or the part may be placed in such a position before bandaging as to favor closing it. All large wounds should be kept quiet for a number of days to insure rapid healing. It sometimes happens that a wound does well for a few days, then from taking cold in it, or from irritation and over use, pain, redness and swelling begin. The very best treatment in such cases is to apply a hot poultice with a little laudanum poured upon it, if it is at hand. This prevents the threatened inflammation.

Fingers and Toes Cut off.—If found immediately, they should be put back in place after being cleansed, and kept warm till a surgeon arrives, who may think best to sew the part on with the hope that healing may take place. If a small part of the skin remains not cut off, the chances of healing are good, when properly treated.

This treatment applies only to fingers and toes cut off with sharp instruments ; when they are torn off, there is no chance that they will heal or “ grow on.”

Cuts of the Face require skilful treatment in order to prevent disfigurement from ugly scars. Clean cuts should be accurately closed, and generally should be sewed up with fine stitches. It is difficult to apply adhesive plaster on the face so as to prevent gaping of the wound. On this account, even if the wound is not very extensive, a surgeon should be called.

Cut Wounds of the Scalp. Plasters cannot be applied here unless the hair is shaved off. A few stitches are needed to close large wounds. Some surgeons advise that small locks of hair on either side of the wound be waxed, and with these the wound tied together. Bleeding is apt to be free, but it may be controlled by pressing the edges of the wound against the skull bones.

Cuts or Stabbing Wounds of the Abdomen or Chest.— If the abdominal walls, or the walls of the chest are cut through, allowing a part of the bowels, or, in the latter case, a part of the lungs to escape, they should at first be covered with some soft cloth wet in warm water, and kept warm till they can be returned by skilful hands.

Cut Throat Wounds do not often prove fatal. The blood-vessels of the neck are so deep, and the windpipe is so difficult to cut through, that life is, in this way, fortunately saved. If there is much hemorrhage, cloths wrung out of iced-water must be pressed firmly into the wound, and the head bowed forcibly forward upon the

breast. In this way, pressure is made upon the bleeding vessels, and somewhat checks the hemorrhage till skilled assistance is obtained.

Punctured Wounds are those made with pointed instruments, such as knives, needles, nails, pitchfork tines, etc. The chief danger from such wounds is that pus or matter may collect in the deep part of the wound, where it cannot get vent. Some surgeons slit such wounds open, thus converting them into clean cuts, which they find no difficulty in healing. People think there is great danger of lock-jaw from punctured wounds, especially those made with rusty nails. The chances of this, however, are rather small. The only bad thing about a rusty nail is, that it carries into the wound more rust and dirt than cleaner instruments do.

Treatment.—The important point in the treatment of all punctured wounds, is to try and prevent the healing or sticking together of the external lips of the wound till healing has taken place within. A small piece of lint may be stuffed into the external wound to keep it open till the deep part is healed.

A puncture made with a sharp instrument should be so bandaged that the sides of the wound are closely pressed together, when healing through the entire extent will rapidly follow. If, after a day or two, punctured wounds become angry, swollen and painful, they should be poulticed, or freely opened, if there are signs that matter is pent up within.

When the flesh has been deeply punctured or pricked with some small instrument like a rusty tack, small nail, dirty splinter or penknife, or anything irritating or poisonous, redness, swelling and pain sometimes result. It happens in this way: the skin, being elastic, immediately closes, leaving inflammatory products tightly bound in beneath. If neglected, considerable trouble may arise.

When pain and redness first appear, cloths wrung out of ice-cold water should be immediately applied, or hot poultices with laudanum or arnica poured upon them may be used. If matter collects it should be let out at once.

Fish-hooks and *Needles* make punctured wounds which soon heal. Needles are easily extracted when they are not broken off. To find and get out a small piece of a needle is a very discouraging undertaking. They may remain in the body a long time and give no trouble. They often travel long journeys through the body.

Fish-hooks are difficult things to get out unless one goes to work the right way. Grasp the hook firmly, and with a quick motion pull it entirely through till the barbed end projects above the skin. If a small file is at hand, either end of the hook can be notched and easily broken off; then the hook is readily taken out. If the line-end is small, it can be pulled through without trouble.

Splinters and Thorns.—These can generally be pulled out with a pair of tweezers; if not, poultice the part to hasten suppuration, when they can be removed easily.

Splinters driven up under the nails are painful things. By cutting a little notch in the nail, they can usually be removed; if not, scrape the nail over the splinter with a sharp knife or with a piece of glass till it is very thin, then with a very sharp knife cut down upon the splinter and remove it. Small punctured wounds are often on the hands. To cover them with good adhesive plaster is the best treatment. It keeps dirt from the wound and prevents irritation. If one "gets cold" in these punctured wounds, the best treatment is to apply hot poultices with a little arnica or laudanum upon them.

Gunshot Wounds are sometimes seen in civil life as the result of carelessness in handling fire-arms, or in shooting affrays.

It is something of a comforting thought, to one who has had a bullet lodged in his body, to know that if it cannot be easily extracted there are a good many chances that it may give no trouble, or that it may in time come to the surface, when it can be easily removed.

Treatment.—Many skilful surgeons at the present day do not think it advisable to explore extensively for a bullet, unless it gives great trouble. If it is lodged just under the skin, it can be picked out after cutting through the skin. There is no calculating in what place a bullet may be that has been shot into the body; it glances in unexpected directions. A careful examination of the skin should be made to find whether the bullet has passed out or not. The wound must be examined

carefully for any pieces of clothing, wadding, or other things which may have been carried into it, and these things removed. The wound should then be thoroughly syringed or drenched with a solution of carbolic acid or other antiseptic; after this, the very best treatment is the application of the hot water dressing which allays pain and prevents inflammation.

Powder in the Skin.—By the explosion of powder, unburnt grains of it are sometimes lodged in the skin of the face. There is no other way of removing except by patient work with the sharp point of a penknife or lancet, picking out particle by particle. Small shot in the skin must be removed in the same way.

Poisoned Wounds are those made by rabid animals, venomous serpents, scorpions, centipedes, bees, hornets, spiders, insects, etc., or by any poisonous substances introduced under the skin. The treatment of the bites of rabid animals is described in an article to follow.

Treatment.—If the wound is small, such as the stings of insects, bees, hornets and wasps, the bites of spiders, etc., and there is great pain and swelling, the application of a solution of aqua ammonia, soda or carbolic acid is of much benefit. In some cases ice seems to be best. Hot poultices moistened with laudanum have a good effect. A pinch of salt dampened and rubbed in is useful. It is said that a slice of onion rubbed on gives instant relief for small stings.

The bites of flies sometimes make poisonous wounds if they have just come from eating putrid matter. Wash them with carbolic acid and apply a poultice. If one has been bitten by a rattlesnake, it is advised that the fold of skin containing the puncture be taken into the mouth immediately and strong suction made. If there is no sore on the lips or in the mouth, this can be done without harm. Large drinks of alcoholic stimulants to prevent dangerous depression are recommended. In the treatment of the bites of venomous serpents, some surgeons think it best to cut the wound out immediately. A cord or handkerchief should be instantly tied around the limb *above* the wound to prevent absorption of the poison, then if one has the grit to bear it, and anyone is at hand who has the courage to do it, it may be done. The next safe thing is to burn the wound out with a red-hot wire or with lunar caustic. After this a poultice should be applied.

Large poisonous wounds or bites must be treated locally the same as directed in cases of rabid animal bites.

THE BITES OF MAD DOGS.

HYDROPHOBIA.

WE begin with a protest against the common but foolish practice of killing a dog immediately after he has bitten a person, because somebody *says* he is mad. Perhaps the dog is not mad, but who will know if he is immediately killed? Put him in some safe place at once, and watch developments. If the animal remains well, eats well, drinks well, looks sleek and seems happy, what a load of fear, anxiety and horror would roll from one's mind when assured by this continued health that the dog which had bitten him was not mad. Dogs really rabid die in from four to eight days from the beginning of the disease. On the other hand, if the dog had been killed by the law of custom, the wound would be watched, and afterwards the scar, for months, with fear and uncertainty. Nor is this all. Surgeons think that many die of fright who are supposed to die of Hydrophobia. An ordinary tooth wound may not heal well when the patient is very frightened about it; his mind is constantly centered upon it day and night; he is robbed of sleep and appetite for food; he becomes weak, and nervous spasms easily set in, which he and his frightened attendants allow are those of the dreaded disease. When once begun, the extent to which nervous disturbances may go is truly wonderful. Cases of spurious Hydrophobia may happen

in this way. As mad-dog-scares are common, a brief description of the symptoms of real canine madness may not be out of place here. The disposition and habits of the dog are changed; he may seem fond of his master for a few minutes, but soon is sullen and suspicious; he mopes about and avoids society, or hides in dark corners; his appetite becomes depraved, sometimes very greedy; he chews various things not food; he looks haggard, and his eyes are perhaps bloodshot, or have lost their natural expression. When quiet, his breathing is unnaturally rapid and labored. The bark is uttered in a hoarse, rough tone. The dog may soon show a disposition to snap at other dogs or at surrounding objects, without provocation, and contrary to his former habits. In the later stages of the disease, ropes of saliva hang from his mouth, and his lower jaw is dropped. He has a fear of drinking water after one or two trials at it. In the furious stage, the animal runs wildly around, snapping at everything, even at imaginary objects, with a peculiar hoarse bark. He lives from four to eight days.

The celebrated veterinary surgeon, Youatt, graphically describes the early symptoms in a dog about to run mad in the following language:

“In the greater number of cases there are sullenness, fidgetiness and continued shifting of position. When I have had opportunity I have generally found these circumstances in succession. For several successive hours perhaps he retreats to his basket or bed. He shows no disposition to bite, and he answers the call upon him laggardly. He is curled up and his face is buried between his paws and his breast. At length he

begins to be fidgety. He searches out new resting places; but very soon changes them for others. He takes again to his own bed; but he is continually shifting his posture. He begins to gaze strangely about him as he lies on his bed. His countenance is clouded and suspicious. He comes to one and another of the family and fixes on them a steadfast gaze as if he would read their very thoughts. 'I feel strangely ill,' he seems to say, 'have you anything to do with it? or you? or you?'

"Has not a dog mind enough for this? If we have observed a rabid dog at the commencement of the disease, we have seen this to the very life."

The same writer further says :

"The sullen form is characterized by shyness and depression in which there is no disposition to bite, and no fear of fluids. The dog appears to be unusually quiet, is melancholy and has depression of spirits; although he has no fear of water, he does not drink. The fear of water (which the word Hydrophobia means) it should be said, is acquired by experience, the effort of swallowing being attended with spasm of the muscles of the throat."

It is a comforting and an important thing to know that the bite of a rabid animal is not always followed by Hydrophobia, for these reasons :

First. When the bite is through clothing, as it often is, the poisonous saliva is wiped from the teeth by the clothing.

Second. When the skin is only grazed the poison will not be absorbed as a rule.

Third. When the bite is on uncovered parts it may not, for some inexplorable reason, be followed by Hydrophobia.

Treatment.—What can be done immediately when one is bitten by a rabid animal?

First.—If the wound is on a limb, tie a cord or handkerchief tightly around it *above* the wound. This prevents, to some extent, the poison from entering the circulation.

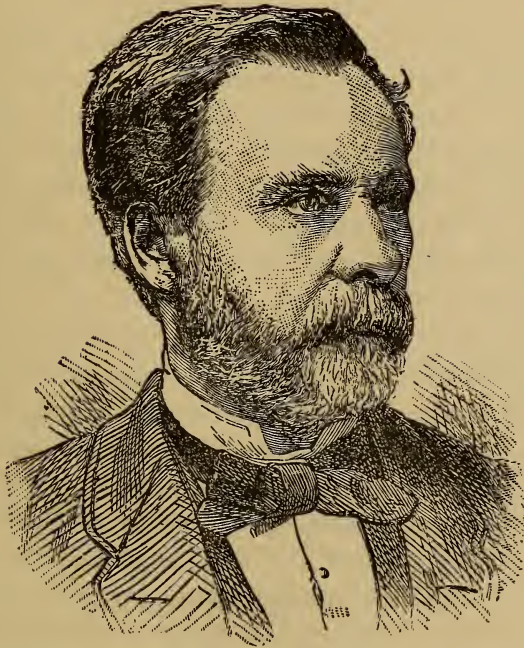
Second.—Apply suction to the wound, either with the mouth or with a cupping-glass, to draw out all the poison possible.

Third.—If carbolic acid is at hand, dip a little stick in it repeatedly, and touch the acid upon all parts of the wound. This is easily done, and many surgeons think it is the best of all possible treatment. The wound may be cauterized with nitrate of silver (lunar caustic), or, if the patient has the grit to bear it, burn it out with a red-hot wire; or cut the wound entirely out. After the wound is cauterized apply a poultice to relieve pain and to encourage suppuration. This is about all that can be done, even by a surgeon, unless the patient crosses the Atlantic, where he can be treated by the celebrated method of M. Pasteur, of Paris.

A sensible surgeon says :

“ In case of a bite from a supposed mad dog, let the things suggested above be done; then let quiet be secured and the very best medical man in the place sent for. It is a very serious matter, and calls for the clearest head and most extensive information. Whoever gets flurried at such times is scarcely less dangerous than the dog that did the biting. Then let no one breathe Hydrophobia or talk about what has happened. By this the chances of escape will be increased.”

Since writing the above, a Pasteur Hospital has been established in N. Y. City for the treatment of Hydrophobia. This method consists of repeated inoculations with the hydrophobic poison, at first attenuated, afterwards increased in strength, until the system is able to



Louis Pasteur of Paris, inventor of a method of inoculation to prevent Hydrophobia.

resist the disease. It is claimed by its distinguished discoverer, that if this method is followed soon after the bite, the person is so "protected" that he will escape the real disease. If the whole truth is spoken, it must be said that many surgeons in this country and abroad

have doubts about the genuine protection which is claimed for this method; the chances in its favor are, at least, enough to demand a thorough and continued trial of it; time will determine its real value as a preventive of this terrible disease.

Lacerated or Contused Wounds are tears or bruises of the flesh, the edges of which are more or less ragged and irregular; they differ from clean cuts in being much less apt to bleed profusely; they are less painful, but require a much longer time to heal. They must heal by granulation or second intention. In larger wounds suppuration (the formation of matter) generally takes place.

Treatment.—Small wounds after being cleansed, may be dressed with a little cosmoline, covered with lint and secured with a bandage; or strips of adhesive plaster may be used to draw the ragged wound together as much as possible, and protect it from dirt and friction. Large lacerated wounds should first be cleansed of all foreign matters, then washed in a solution of carbolic acid, dilute alcohol, or if nothing better is at hand, in sulphur or borax and water (after the antiseptic method), then apply clean cloths wrung out in hot water till a surgeon arrives. If the wound is not very large, it is well treated by a dressing of clean lint with a little carbolized cosmoline or even mutton tallow spread upon it. If at hand, use strips of sticking plaster to draw the wound together; apply a pad and retain in place by a roller bandage.

Crushed Fingers and Toes.—When the bones are not broken, press or mould into as natural shape as possible and “dress in the blood ;” that is, bandage before bleeding has entirely stopped ; the blood and bandage, when dried, make a protective casing, while nature glues the flesh together. If the bandage becomes too hard, it may be softened by pouring upon it arnica or dilute alcohol. The second day remove the bandage by soaking it in soap and water, and apply adhesive plaster.

Crushed Hands, Feet, Arms and Legs.—If hemorrhage seems dangerous, pour ice-cold water or hot water upon the limb. Let the patient lie down and place the limb higher than the body. If this does not control the bleeding, proceed as directed in the article on hemorrhage. As soon as bleeding has stopped, wrap the crushed part in cloths wrung out in hot or cold water, whichever is most agreeable to the patient’s feelings, and keep the limb elevated till a medical man arrives.

Contusions.—These in common language are bruises. They may be very painful. Blood-vessels are broken under the skin allowing blood to escape into the tissues, which is the cause of the varied discoloration which is noticed in such injuries. A black eye is a good example. At first cloths wet in iced-water is the best remedy, but with some persons hot water is more agreeable ; afterwards, pure laudanum, tincture of arnica, or the dilute tincture of iodine may be applied with benefit. If nothing better is at hand, vinegar answers a good purpose.

MOSQUITO BITES.

The poet Bryant in an address to the mosquito begins with the following plaintive request :

FAIR INSECT! that with threadlike legs spread out,

Dost murmur, as thou sail'st about;
Try some plump alderman, and suck the blood
Enriched by generous wine and costly meat;

Go to the men for whom, in ocean's halls,
The oyster breeds and the green turtle sprawls

A writer in the current number of the *North American Review* states, that one "Dr. Lamborn has recently offered a prize for a preliminary study of the habits of the dragon fly (devil's darning needle) with a view to its propagation as a destroyer of the mosquito, and that it has found the ready ear of the American nation." This seems a large-sized project; if it succeeds, and nearly all the mosquitoes in the country are headed off or devoured by a vast army of devil's darning needles, the treatment here advised for the prevention or cure of mosquito bites will be altogether behind the times. Mosquitoes are a great pest in nearly all parts of the world; they are found as far north as Labrador. They not only disturb the peace and happiness of the dwellers in country houses, but they come swooping down upon the innocent inhabitants of N. Y. City, from the lowlands of New Jersey, in innumerable armies. These tiny creatures have caused the rout of armies and the desertion

of cities, it is said. The writer visited the famous Rangeley Lakes in the northern part of Maine for trout fishing and found the bites plenty, but about in this ratio
1000 : 1

in favor of mosquitoes. To many persons, especially to children, mosquito bites are very poisonous, causing inflammation of the skin, with pain and swelling.

Treatment.—Their presence in sleeping-rooms is most annoying. To drive them out of a room, take a piece of gum camphor half as large as a hen's egg, place it in a basin and hold it over a lamp; the fumes soon fill the room and expel the mosquitoes; not one will be found in it the next morning.

It is not generally known that the bites of these pestiferous creatures may be prevented by bathing the exposed parts of the body, the hands, face, neck, and also the hair in a weak solution (5 per cent.) of carbolic acid. The pillows in the bed may be sprinkled with the same.

The solution is either poisonous or very disagreeable to these creatures.

English surgeons highly recommend pennyroyal to prevent the mosquito bites. To cure the bites, bathe the parts in either a solution of ammonia, bicarbonate of soda, bromide of potassium or pennyroyal. Salt moistened with vinegar is a good remedy.

If the face or limbs are very much swollen, inflamed and painful from the effect of these bites, as they often are in children, the application of hot carbolized water for an hour or two is the best thing known.

MACHINERY AND RAILROAD INJURIES.

The first and most noticeable thing after these severe injuries is apt to be the profound Shock from which the person is suffering. The appearance of the injured is often such that uninformed workmen and bystanders might think the person dead when he is not, and when he could, with prompt and proper treatment, be rallied. On this account we have called attention here to the subject of Shock. This condition may be caused by profuse hemorrhage, the fracture of bones, the crushing of limbs, internal injuries, or simply by a violent disturbance of the nervous system.

Enterprising railroad companies are beginning to see the importance of giving to their employes some means of instruction as to the prompt treatment of their injured. They have put into the hands of their workmen books of instruction and cases of medicines, and appliances for emergencies. Surgeons cannot always be obtained at a moment's notice and in the nick of time when their services would do the most good.

In a machinery accident a man might die in ten minutes from hemorrhage, when simple pressure with the finger would save his life, if a workman knew where to make it. This could be easily learned with a little attention.

The injured person should be placed at once in a reclining posture, and rallied from the shock, then ex-

amined. If fractures or dislocations of limbs exist, they should be placed in a position as comfortable as possible. While waiting for a surgeon, apply cloths wrung out of hot water to the injured part, to prevent pain and swelling.

Large lacerated wounds or tears of the flesh must be, as soon as possible, washed with warm water, to which it is preferable to add a little carbolic acid. All dirt, pieces of clothing, splinters, and other foreign substances should be at once removed with the best pair of forceps at hand, usually the thumb and fingers. Then the very best thing to do is to get some soft, clean cloths, saturate them in an antiseptic solution, and apply till a medical man arrives.

If hands, feet or limbs are torn off, the first care will be to arrest the hemorrhage. Tie a handkerchief, cord, or anything at hand around the stump close to the end. This may pinch together the bleeding vessels, and stop the flow. Railroad injuries cause very great depression of the vital forces; on this account stimulants are called for in severe cases.

Precautions.—In riding on railway trains select the rear cars; they are safer than those near the engine. The rear cars often escape disasters which the forward ones do not. If it is known in season that a collision is to take place, or that violent commotion is to happen in the car, grasp the seat in which you are sitting, and try to avoid the danger of being thrown from your place. The American Health Association (office at Concord,

N. H.,) has published a prize essay (price 5c.) on the causes of disease, injury and death in American manufacturing and workshops, which, in the way of precautions against injuries, is profitable reading.

INJURIES OF THE HEAD.

Injuries resulting from blows upon the head or from falls are common, and are attended with considerable danger. This saying has been ascribed to Sir Astley Cooper: "No injury to the head is too slight to be despised, nor too severe to be despaired of." As they are common and important we notice here *Concussion* and *Compression* of the brain, and *Scalp Wounds*.

Concussion of the *brain* means a violent shaking up or jarring of the brain, in consequence of which some part of the brain, its membranes or blood-vessels, may be torn; in other cases the symptoms are simply the effects of Shock.

In mild cases the person is said to be stunned from a blow on the head or from a fall; he feels giddy and confused, is faint and weak for a few minutes.

In more severe cases the patient falls to the ground half conscious; he may be aroused for a few seconds possibly, but soon relapses into his former state. The pulse is feeble, the skin cool and wet with perspiration; the limbs flaccid and motionless; there may be paralysis or convulsive twitchings of some muscles. This is the first stage of severe concussion of the brain.

If the person is about to rally, the circulation improves, the pulse becomes stronger, and the skin warm; generally the patient vomits, after which he is better.

In other cases he remains for hours semi-conscious,

with very feeble pulse, the skin cold and death-like ; or death may rapidly follow.

Vomiting is a symptom of a good deal of significance for if the patient vomits it is a sign that he is about to rally ; if he does not, it may be known that the injury is either very slight, or so severe that he will probably die.

Such is the appearance of a person suffering from *Concussion* of the brain. What can be done ?

Treatment.—The ordinary, less severe cases do **not** require treatment. If marked symptoms of prostration are present, something to assist the patient to rally may be done. He should recline with the head slightly raised. The flagging circulation must be stimulated by artificial heat, applied to the skin in any convenient way. If the injured man can swallow, give aromatic spirits of ammonia, or small quantities of other spirits. When reaction takes place, throbbing pain and heat of the head may begin ; if it does, apply ice-cold water to the head, and give 20 gr. doses of the bromide of potassium every two hours. Quiet and freedom from all excitement must be observed. It is well at first, in injuries of the head, to give medicine to open the bowels freely.

Compression of the *brain*.—We find here a different condition of things. A blow may fracture the skull, or blood may be poured out between the skull and brain, forming a clot ; in either case causing pressure upon the brain. An external examination may not reveal what has happened, but the condition of the injured person will plainly show it. He is profoundly unconscious, his

breathing is heavy, and he snores with a peculiar puffing out of the lips, and his pulse is slow and full. There may be convulsions, and possibly bleeding from the ears and nose, in fracture at the base of the skull. Nothing can be done except to remove the pressure by the use of the *trepine* in the hands of a surgeon.

Scalp Wounds are made by things falling upon the head, or from blows and cuts; much greater importance attaches to these than to wounds in most other parts. Following the teaching of the antiseptic method, surgeons now advise that the scalp around the wound be shaved, or the hair closely cut, and that it be washed and scrubbed with soap and water containing carbolic acid, to get rid of all impurities or germs that might get into the wound and cause putrefaction. Perfect cleanliness is the important thing. If the scalp is sufficiently shaved, sticking plasters may be used to draw the wound together; or it may be dressed with clean lint or cloth with carbolized cosmoline spread upon it, covered with a pad, and the whole kept in place by a bandage around the head.

If inflammation should begin in the wound, that is, if it becomes red and painful, an attempt should be made to limit it by applying ice-water, which is probably the most reliable remedy; if one objects to its use, hot water or poultices may be substituted. A seidlitz powder should be given for its mild action upon the bowels.

If the scalp is torn down in strips, or partly torn off from the skull, it should be thoroughly cleansed in some

antiseptic solution, and immediately put back in place ; it is truly surprising how readily it heals on in young and healthy subjects.

Precautions.—If a person is obliged to drop or jump from a height, he should alight on the balls of his feet with the knees bent. Striking upon the heels might cause a concussion of the brain or of the spine. If riding in a runaway team, the safer thing, generally, is to cling to the carriage. Jumping from the carriage while in rapid motion is dangerous ; concussion of the brain is often the result.

BROKEN BONES OR FRACTURES.

Fractures are either simple or compound. In a simple fracture the bone only is broken. A compound fracture is so called because the bone and the skin are both broken ; the ends of the bone may be driven through the skin so as to be seen. A compound fracture is a serious matter, as it is difficult to heal. The following signs show that a bone is broken.

1. The limb is deformed, or changed in its shape compared with the well one.

2. The limb is unnaturally moveable at the place of fracture.

3. Grating may be heard and felt when the limb is moved or slightly twisted.

4. A broken limb is usually shorter than its fellow.

5. The ends of the broken bone may be felt when the fingers are passed along its line.

Dislocations are not infrequently mistaken for fractures by the inexperienced, but they take place only at joints, and the above signs of fracture are wanting, excepting the deformity, and possibly the shortening. A dislocated limb resists movements in certain directions, unlike the easy mobility of a broken one.

There is a tendency for one end of a broken bone to slip by the other as seen to a slight extent in the figure. Most people think that a fracture must be set immediately. Unless the patient is in great pain there is no

excessive haste required. A broken bone can be examined better, to be sure, immediately after the injury,



Fig. 16—Showing an oblique fracture at the elbow.

because there is less swelling. Healing does not begin for a number of days after the fracture, even if the bone is put in place.

If a surgeon can be obtained, it is not to be expected that any unskilled person will attempt to “set” a broken bone. In case an exigency should arise, the following hints may be of use in the treatment of fractures of the long bones, so called: those of the leg and arm.

The secret of the operation of “setting a bone” is not difficult to understand. A proper amount of traction or pulling upon the limb is usually required to restore it to its natural shape and length, when the ends of the fractured bones generally fall into their proper place. The injured limb can be compared with its fellow, the sound one, to see if they are just alike in shape and in the position of the bones. The next step is to apply and bind on splints, to retain the bone in place. Thin pieces of board or strips of strong pasteboard make good splints. They should be long enough to reach the whole length of the fractured bone, padded with some soft material on the inside, placed on both sides of the limb, and firmly bound in place to prevent motion at the point of fracture or getting out of place.

The impromptu surgeon of a certain hunting-party got great praise for the readiness with which he invented the apparatus, and set a fractured arm which one of the number had just received. From a birch tree near by he took strips of birch bark which made excellent splints, sufficiently firm for this part. His old linen coat was pressed into the service, from which first class bandages and paddings were made. The splints were nicely adjusted and bound in place. With these improvised appliances the fracture was "put up" on the spot in a neat and scientific manner, and did well till the party got out of the woods.

If a surgeon can be obtained within a few hours, the best treatment is to place the injured limb in as easy position as possible, and apply flannels dipped in hot water to which wormwood is added, or in very cold water, whichever is most agreeable to the patient's feelings; this prevents to some extent the pain and swelling. If it is necessary to move the injured person to some distance, temporary splints should be applied, as described above. In compound fractures the broken skin or wound should be covered with a compress, wetted in some antiseptic solution. We describe the temporary treatment of a few of the most common fractures.

Fracture of the Wrist is perhaps the most common fracture in adults. A person falling naturally throws out his hand to save himself, and receives the weight of his body upon the wrist, which gives way. The radius (the inner bone of the forearm) is often broken near the

wrist joint, making what is called the silver-fork fracture. Both bones of the forearm near the wrist may be



Silver fork fracture of the wrist.

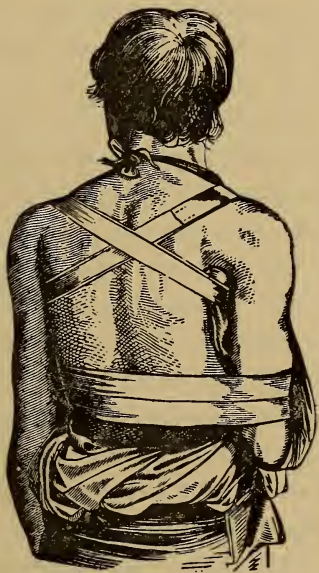
broken, or the outer one only dislocated. Temporary splints may be applied thus: grasp the hand and elbow, and by gentle pulling restore the wrist to its natural shape as compared with the sound one. Two splints made of stout pasteboard and padded with some soft material should be applied; one on the palm side of the forearm, reaching from the bend of the arm to the middle joints of the fingers, the other on the outer side, with the hand so turned that the thumb is uppermost. Bind the splints on firmly with a roller bandage beginning at the fingers; place the arm in a sling, bearing the whole length of the forearm, and raised a little higher than the elbow.

Fracture of the Collar Bone is a common fracture, especially in children. It is easily detected because the bone is small, just under the skin, and can be easily felt and examined with the fingers. The fracture is usually oblique, leaving the sharp ends liable to be pushed through the skin, converting it into a compound fracture. The patient should be laid on his back with a folded

blanket between his shoulders, and no pillow under the head, the object of such treatment being to keep the shoulders outward and backward to prevent further displacement. If it is necessary to move the person, place a pad as large as a man's fist in the armpit, carry the forearm across the front of the chest and support it with a broad sling; long bandages should be carried several times around the body, to fix and retain the arm in this position.

Broken Ribs.—It may be known that ribs have been broken if, after a fall upon the side, a kick or a blow upon it, there is a catching pain in the side every time the person takes a long breath, coughs, or sneezes; the broken place can sometimes be felt.

The following simple treatment affords great



Bandages applied for fracture of collar-bone.

comfort, and in most cases is sufficient to a cure. Take a stout piece of cloth, such as drilling, about one foot wide, and more than long enough to reach around the chest. Attach several buckles to one end of it; cut the other end into strips to pass through the buckles; buckle this as tightly around the chest as can be comfortably borne.

The purpose is to prevent motion of the fractured ends of the ribs, which is the cause of the pain. A roller wound tightly round the chest is good treatment. Some surgeons advise to put long strips of adhesive plaster on the injured side, extending from the middle of the chest bone to the back bone, and parallel to the ribs, beginning the strips at the lower part of the chest wall and going up. This somewhat prevents painful movement of the ribs.

Fracture of the Hip.—A very common fracture, and one that slight causes may produce in women sixty years or more of age, is one at the neck of the thigh bone, near the joint. After such an injury movements of the thigh are very painful, and limited from loss of power. When the patient lies on the back with the leg extended, the foot and leg are inclined to turn outwards, and the injured leg is often shorter than the other. Permanent lameness is usually the result. If an injury of this kind is suspected, the patient should recline, and the limb be put in as easy position as can be, with the knee raised and a pillow under it.

Precautions.—A celebrated English surgeon says on this subject :

“Immediately after the accident (fracture) there are certain minor, much neglected precautions to be taken, the observance of which materially affect the comfort and well being of the patient. Many fractures of the lower extremities are seriously aggravated by his own impatient movements or by the ignorance and thoughtlessness of attendants. Frequently is a simple converted into a compound fracture ; the soft parts are bruised and

lacerated and the foundation laid for violent inflammations and spasms. By small care such accidents may readily be avoided. The patient should be placed on a horizontal support, whether a door or shutter, or a proper litter, and the foot of the injured limb should be tied to the other to prevent its eversion by its own weight. Conveyance in a carriage of any kind is to be condemned."

DISLOCATIONS.

These are displacements of the joint ends of bones; there may be, and occasionally is, a fracture at the joint at the same time; but simple dislocations are common. The following condition of things shows that a dislocation has taken place.

1. The joint is much deformed or misshapen as compared with the corresponding joint on the well side of the body.

2. The joint cannot be naturally moved; it seems bound, or fixed in one direction.

3. Absence of grating sounds when the limb is moved.

The most common dislocations are those of the shoulder and elbow. A partial dislocation of the ankle

joint is very common, and it is a painful and troublesome injury, often complicated with a fracture.



Dislocation of the lower jaw.

Dislocation of the lower jaw is rather an awkward accident to the patient; he cannot talk plainly, and cannot close his mouth. It can be put in place by nearly anyone with a little knowledge of what needs to be done.

Treatment.—Let the patient sit on the floor with his head resting against the operator's knee. Place between the jaw teeth a clothespin, or a

piece of wood or cork, to act as a fulcrum. The operator stoops down over the patient, passes the fingers of one hand between those of the other, forming a loop of his hands, and pulls upward; the joint ends of the jaw are raised, and slip forward into place.

Dislocation of Fingers and Thumbs may sometimes be



Clove-hitch applied to dislocated finger.

easily put in place by strong pulling, at the same time pressing the ends into place; but generally it requires more force and stronger pulling than one would think to reduce these small bones. A clove-hitch represented in the figure makes the best means of extending or pulling.

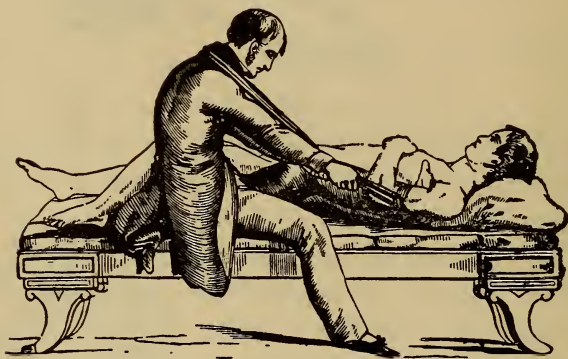


Clove-hitch.

Dislocation of the Shoulder means the displacement of the head of the bone of the arm (humerus) from its socket. This is probably the most common dislocation which occurs in the adult. The shoulder appears very much misshapen, and the arm projects from the side, and cannot without great pain be carried down close to the side. In some cases it easily slips back into place with a little manipulation, but generally the patient should be etherized, for this so

relaxes the muscles that reduction is altogether easier and is painless.

Treatment.—If it is certain that it is a case of simple dislocation at the shoulder, the following method may be tried. Let the patient lie down on the floor or sofa; the operator places the heel of his foot (boot removed) in the armpit of the injured side, then pulls downward on the arm and sweeps it over toward the opposite side, thus prying the head of the bone into its socket.



Method of reducing dislocation of the shoulder.

Dislocation at the elbow is apt to be complicated with a fracture, and should not be touched by any unskilled person; and generally speaking all dislocations should be left for a surgeon to manage. The best thing to do while waiting is to place the injured part in as easy position as possible, and cover it with thick cloths wrung out of hot water, to which wormwood, arnica or laudanum is added, and keep the patient at rest.

Bandaging.—Many kinds of bandages are used by surgeons, but we shall confine ourselves to the description of a few only. The *roller bandage* is in common use. It is made of any suitable material, such as old or new cotton cloth cut or torn into long narrow strips. To make it very long the strips are sewed together. Before it is ready for use it is rolled up into a firm roll. The following cut shows the appearance of the roll and the manner of applying it. (See Fig. 17.)

Begin at the extremity of a limb. If a wound is at the ankle or a little higher on the leg, for instance, begin at the toes. When the bandage comes to the heel and ankle, a figure-of-8 turn must be made around it. As the bandage comes to the larger part of the leg, it must be folded upon itself a little, to make it lie flat and smooth. This is illustrated by the cut. The bandage is fastened with pins or stitches, or the end may be slit up into two strips and one carried round in the opposite direction to the other and tied to it. A writer suggests the following as proper dimensions for different parts :

PART.	WIDTH.	LENGTH.
Fingers,	$\frac{3}{4}$ to 1 inch,	. . . . 1 yard.
Arm,	2 to $2\frac{1}{2}$ inches,	. . . . 3 to 6 yards.
Leg,	$2\frac{1}{2}$ to 3 inches,	. . . . 6 to 8 yards.
Chest,	4 to 5 inches,	. . . . 8 to 12 yards.
Head,	2 to $2\frac{1}{2}$ inches,	. . . . 4 to 6 yards.

The roller is used in applying splints to the wrist and forearm, and to the ankle and leg, and in dressing wounds of these parts. The writer has applied a roller bandage to-day, and since writing the above, in a case

of fractured ribs. It was bound as tightly around the chest as the man could bear, thus preventing painful motion of the broken ribs, and affording great relief.



Fig. 17.—Applying the Roller Bandage.

The *triangular*, called also the *Esmarch*, and the *handkerchief* bandage is better adapted to use in many cases. It may be made from a piece of cloth forty inches square, cut through from one corner to the opposite one. A large square handkerchief folded into triangular form makes the same thing. A society in N. Y. City for instruction in first aids to the injured, directs that instruction shall be given in the use of this bandage



Figure-of-8 and 4-Tailed Bandage applied to the Head.

only. It can be folded into a narrow or a wide bandage. The accompanying diagram shows the various ways the triangular bandage may be used.



Showing the different parts to which the Triangular Bandage may be applied, and the manner of applying it.

The *figure-of-8 bandage* is sometimes needed. It is made of long narrow strips of cloth and used in dressing fractures of the collar bone, in sores or wounds in or about the armpit, etc. (See page 99.)

The *4-tailed bandage* is made by taking a piece of cloth about six inches wide and as long as desired, and splitting up both ends to within four or six inches of the center. It is used in dressing wounds of the knee joint, fractures or wounds of the lower jaw, and in applying dressings to the head.

To fasten temporary splints to the limbs, the handkerchief bandage or any piece of cloth of uniform width, or even cords may be used. In applying bandages to limbs, it must be remembered not to put them on more tightly above than at the lower part of the limb. It might produce troublesome and painful swelling.

Sprains of Joints.—Joints are fastened together by ligaments. When the joint is violently twisted, these bands or ligaments are overstretched or strained and often torn, causing a great amount of pain, swelling and discomfort. Ligaments are not elastic, and cannot be stretched without injury. The pain in many cases of sprains is as severe as it is in fractures. A sprain may be known by the fact that the joint remains in its natural shape, except the swelling, as compared with its fellow; if fractured or dislocated, it is misshapen very evidently. Sprains of the ankle are common and are troublesome and painful things. The

end of one of the long bones which passes down to the joint is often fractured in addition to the sprain. In case of severe sprain of the ankle the best treatment at first is to put the foot into a pail full of hot water, frequently adding to it more water to keep it hot; continue this for an hour, then remove it from the water, rub dry and apply a roller bandage tightly, beginning at the toes and putting it on half way up the leg. This treatment prevents inflammation and swelling, and relieves pain. The next important thing is to keep the ankle at perfect rest. No attempt should be made to step upon the foot for awhile. All other sprains may be treated on the same principle. Some physicians direct that the sprained joint should be treated with the application of cloths wrung out of ice-cold water to prevent inflammation. Whatever is applied, rest of the joint is very essential to a speedy cure. Liniments at first are of but little use.

BURNS AND SCALDS.

These are too common to call for much description. They are always painful and need prompt treatment. The danger to life is considerable in many cases. It is said that if one-third to one-half of the skin is burned or scalded the injury will prove fatal within twenty-four to forty-eight hours in a large number of the cases ; but a strong and robust person, with a good nervous system, sometimes recovers when one-half or more of the skin is burned. Deep burns require a very long time to heal ; healing takes place by granulation.

Treatment.—For the small burns and scalds which housewives and others are constantly getting, there is one remedy of very great convenience and value. It should be kept in everybody's kitchen—a mixture of equal parts of creasote and glycerine to be smeared upon the burn as soon as it is received, and repeated every few minutes till the smarting is cured.

Another remedy, and one that is generally at hand, is common cooking soda. Moisten a little with water—making a paste, and apply directly, or dissolve all the soda that can be in a cup of water ; wring out cloths in the solution and apply repeatedly. A mixture of linseed oil and lime water, called carron oil, is an old remedy and a good one. Anything which excludes the air and is soothing to the fine, irritated nerves of the skin is bene-

ficial, such as oil, vaseline, molasses, lard, the white of eggs, cream, starch, flour, etc.

But for large and deep burns or scalds the treatment must be somewhat different. When the hands and feet or arms and legs are extensively burned, it is best to plunge them into cold water till something better can be obtained; or cloths dipped in cold water in which much soda has been dissolved may be used.

If it is at hand, a solution of carbolic acid may be applied. It has a soothing and benumbing effect upon the sensitive nerves of the injured skin.

Linseed oil and white lead (white paint) freely poured over the burned or scalded part is excellent treatment; it excludes the air and relieves the pain instantly.

An ointment made of one part subnitrate of bismuth to two parts of cosmoline makes an elegant and effective remedy when spread on thickly and covered with a soft cloth. Some surgeons advise to pour on mucilage and dust flour over it to a thick coating.

After a burn or scald begins to heal, cosmoline or vaseline to which a little carbolic acid has been added makes an elegant and first rate dressing. It should be applied on a little lint or soft cloth. If this cannot be obtained, some simple ointment, or even mutton tallow or fresh lard, may be substituted; the object being to exclude the air and prevent irritation of the healing surface. The skin is sometimes burned with sulphuric, nitric, muriatic or other acids. Water should not be applied in these cases; it increases the injury. The

proper treatment is to dust on chalk or magnesia. Burns with caustic alkalies such as soda, potassa, lye and ammonia should be immediately drenched with vinegar. When large blisters are formed, care must be taken not to rupture them; they should be pricked under the skin. In cases of extensive burns, the clothing must not be pulled off rudely, for fear of injuring the skin or of breaking the blisters. The nervous system is sometimes profoundly disturbed by burns and scalds. Coma, convulsions and delirium may occur. Bronchitis, laryngitis or pneumonia sometimes result from burns of the neck and chest, and ulceration of the bowels from burns of the abdomen. If the shock to the nervous system seems severe, stimulants may be needed, and an anodyne is required to relieve intense pain.

Precautions.—A person whose clothing has caught on fire, instead of running wildly round should lie down and roll himself up in a woolen rug, piece of carpeting, shawl or blanket, or anything at hand, in order to smother the fire. The majority of cases of injury from fire result from the explosion or dropping of lighted kerosene lamps, and from pouring the oil upon lighted fires. Good oil flashes only when heated to 150° or 160° F.; if it was always used, many of these accidents would be avoided. Cheap oil easily explodes and is dangerous. Water should not be thrown upon burning oil on the floor; it is liable to scatter the fire over the room. The vapor from the following is explosive, and a light should never be brought near an open vessel containing them: gasoline,

benzine, naphtha, ether, camphire, turpentine and alcohol. To extinguish small fires in the house, bottles containing the following liquid may be kept in rooms for immediate use. Dissolve ten pounds of common salt and five pounds of sal ammoniac in three and one-half gallons of water; fill the bottles, and cork. When a fire occurs, throw one or two bottles into it with force enough to break them. The laws of many states provide that fire-escapes shall be placed on all high buildings in which workmen are employed. As a precaution for their own safety, workmen should insist upon it that such provision for escape in case of fire should be supplied in all cases.

Suspended Animation is a term often used by doctors, and means that a person in this state is in a condition of apparent but not real death, that to appearances he is lifeless; he is profoundly unconscious; there is no pulse at the wrist, and apparently no breathing; the appearance of the face is like that of the dead. In certain cases of this kind life may be restored by appropriate treatment. The apparently drowned, persons suffering from breathing burning gas, charcoal fumes, carbonic acid gas, etc., a person struck by lightning, and the inexplicable conditions of trance, etc., are examples of Suspended Animation. In the following articles the means of resuscitating persons from this seeming death will be described. A Boston physician has published a medical work devoting nearly one-third of its pages to a consideration of this subject. He claims

that many persons are buried while in a condition of suspended animation, who could have been, with proper means, resuscitated.

Artificial Respiration.—This is an operation of the greatest importance as a means of saving life in some cases of suspended animation. One who would render intelligent assistance in such cases should understand how to perform it ; it is not difficult in itself, nor hard to understand. What is it? It is simply a method of keeping up the respiratory movements of the chest when the natural breathing is about to stop. Dr. Thomas, in his medical dictionary, defines it thus :

“An important means towards the resuscitation of the apparently drowned or those asphyxiated from breathing poisonous gases or of those suffering from a powerful dose of some narcotic poison. One method is placing the body on one side and alternately rolling it on its face to compress the chest and on its back to allow the elasticity of the ribs free movement to draw air into the lungs. Another mode termed ‘Silvester’s Method’ is to place the patient on his back and then raise the arms upward above his head pulling firmly and steadily so long as there is any sound of air entering the chest. As soon as this sound ceases the arms should be brought down against the chest and pressed against it firmly and steadily for a second or two after air is heard escaping. This operation should be repeated every three or four seconds.”

Before trying the above-described method, try this: place one hand on the patient’s chest, the other on his abdomen, and make firm pressure for one or two seconds ; then remove the hands for as long a time,

repeating the movement. If the sounds of air passing into and out of the lungs are heard, this method may be continued for a minute, when possibly natural breathing may begin. If this is not successful, Silvester's Method



should be tried immediately. The first movement is to draw the arms above the head while counting one, two, three. This movement expands the chest and allows air to enter the lungs. It is illustrated by the above figure.



The second movement is to carry the arms to the sides, with the forearms resting on the chest, and with these to make firm pressure while counting one, two, three.

One other thing must be remembered. It may happen

in a person almost lifeless, that the tongue falls backward into the throat, preventing air from getting into the lungs. An assistant with a dry handkerchief in his hand must seize the tongue and keep it drawn forward while the operations continue. These movements should be continued, not simply for a few minutes, but for an hour or more, if need be, when the impromptu surgeon may be rewarded by the delightful evidences of returning life. Artificial respiration has saved many lives which could not have been otherwise saved. It is here described, for it should be understood before studying the treatment of drowning or asphyxia (obstructed breathing) from other causes.

DROWNING.

RESUSCITATION OF THE APPARENTLY DROWNED.

If a person is submerged in water, one of two things happens :*

First. If he struggles, opens his mouth and breathes water into the lungs and fills them with it, life can continue only about one minute, and the chances of resuscitation are next to nothing.

Second. A condition resembling fainting sometimes happens. The heart beats only feebly ; the breathing is so nearly stopped that no water is drawn into the lungs ; again, if the person holds his breath till the head comes above water, and then takes a deep breath, he may live a longer time. “Marac relates the case of a German woman who was tied up in a bag with a cock and a cat, and thrown into the water as a punishment for child-murder. She was submerged fifteen minutes, and, when removed from the bag and exposed to the air, immediately recovered. Such a prolongation of life without air can only be accounted for on the supposition that the woman fainted on being immersed, and that the state of syncope lasted until she was brought to the surface.” Human beings when drowning alternately sink below and rise again to the surface, giving them a chance to breathe if the lungs are not filled with water ;

*It is stated by some surgeons that a small percentage of deaths are the result of *Shock, Apoplexy, Concussion of the Brain*, etc. It would be difficult to decide at once in a given case whether either of these had happened.

on this account the time a person may remain in water and yet live, varies. The writer knows no way of deciding positively which of the two things above described has happened to the person who has been taken from the water apparently drowned; in one case there is a chance of resuscitation, therefore in all cases a persistent attempt should be made to restore to life.

Treatment.—The patient urgently needs two things: first, that air should be supplied to the lungs—and this must be done artificially if breathing has stopped; second, warmth to the skin is needed. This is a key to the treatment. Before beginning artificial respiration, which is the most important means of getting air into the lungs in imitation of the natural act of breathing, an effort must be made to get all the water possible out of the body. To do this, the patient's tongue should be drawn forward first so that the tip of it rests upon the chin, and kept there by an assistant. The chin should be carried forward from the chest in order to stretch out the neck. With the patient's body face downward, the operator stands astride it, and with his hands spread out under the stomach raises the body partly from the ground, and holds it in this position for a few seconds, to allow water to run out from the stomach, air passages and lungs, repeating the act a few times. The body should now be turned upon the back and artificial respiration begun at once, after clearing the mouth and throat of all foreign substances by sweeping them out with the

fingers. This operation is fully described in the preceding article, which see.

If the operation is properly performed, air may be felt coming from the mouth and nose at each compression of the chest. If natural breathing begins, it should be aided by holding ammonia to the nose, and by dashing hot and then cold water upon the chest; this makes a person catch his breath, as the common saying is. Stimulants should be given as soon as the patient can swallow. In the mean time, and while efforts are being made to get air into the lungs, warmth or heat must be applied to the body in any convenient way, with bottles of hot water, hot plates or bricks, hot blankets, etc., as soon as the wet clothing is removed. Rubbing the skin with dry and hot blankets is useful. The rubbing should be upward towards the heart.

An old-fashioned way of reviving the drowned was to roll the body on a barrel. The water might be gotten out in this way, but the required compression and expansion of the lungs are better made with the newer methods.

It has been reported that a man has been restored, after all other methods failed, by applying to the chest plates of hot iron.

Precautions.—If one falls into the water and there is danger of drowning, it is of great importance to remember (provided that one can retain self-control) to try and float upon it till assistance arrives, if he cannot swim. The body is lighter than water, and will float if

the arms, legs, and the back part of the head are kept under water, and if not much water is swallowed. He should try to lie on his back, stretched at full length, with his arms and legs kept quietly under water, and his head thrown back on a level with the body. Care must be taken to keep the mouth closed, and to inspire quickly and fill the lungs full of air, and hold the breath as long as possible. Struggling and throwing the arms out of the water is a dangerous thing to do, and if one does not guard against it he will sink. Passenger vessels and pleasure yachts are, or should be, furnished with life-preservers which greatly help to float the body. If one is obliged to jump into the water or take to a life-boat, he should think to fasten one of these to the body. Beware of small sail boats. They are dangerous things on inland lakes or on the ocean. A sudden gust easily overturns them. A great many lives are lost every year from accidents of this kind

INJURIES FROM LIGHTNING STROKE.

MEANS OF AVOIDING DANGER

During severe thunder-storms many persons are very timid and suffer from nervous disturbances such as headache, partial blindness, vomiting, swooning, and hysterical attacks. This may seem foolish to those who look upon these storms calmly, as Nature's delightful pyrotechnic displays. Some real protection against danger may be provided, so that the timid may feel, as much as possible, that their chances of harm have been reduced to a minimum. Precautions will be described below. There are, of course, various degrees of injury from lightning, from the most harmless shock to an injury resulting in instant death; but it may be said here that only a small number of those who are "struck" are killed. In cases of slight injury the person is more or less dazed, and perhaps loses consciousness for a brief time; there is sometimes a feeling as if he had received a blow, or been blinded with a dazzling light; or there may be a sensation of numbness, or a partial paralysis of the limbs, which generally passes off in a few hours or days. Nausea and vomiting often occur. In severe cases of stroke the person is knocked down, and may remain unconscious for an indefinite length of time; still, with proper treatment, he will recover. It is the small side current which gives the slight shock, or stroke, from which a person may, and often does, recover. If

one is struck by the main electrical current, there is no question but that it produces instant and painless death in most cases.

Treatment.—If, after a lightning stroke, a person does not seem to breathe, he must be immediately examined to find whether there is any, even the slightest beating of the heart, or pulsating of the large arteries of the neck, or if there is the faintest effort at breathing, or motion of the chest; for in many cases death may be only apparent, not real. If there is the smallest possibility that a spark of life remains, instant efforts at revival should be made. Strip the patient's chest by cutting off the clothing, and dash cold water upon him. If this does not revive him, resort to artificial respiration, as in cases of drowning. This affords the best means of restoring the patient to life. The operation should be continued for a long time if the slightest evidences of life are noticed. When the skin is cold and bathed in sweat, when the pulse is small and rapid, the person is suffering from nervous prostration and failure of the circulation, and needs artificial heat applied around the body, and a vigorous rubbing given to the skin with heated blankets. Stimulants are needed, such as the aromatic spirits of ammonia, alcoholic spirits, or strong tea or coffee.

Precautions.—A person is safe during a thunder-storm in a hammock suspended by silken or rubber cords, attached to porcelain knobs; the hammock to be stretched across the room, and raised about three feet

from the floor. Even if the house is struck by lightning, there would not be one chance of injury in many thousands. A bed, in the season of thunder-storms, may be made a place of more safety by pulling it away from partitions, discarding wire springs and using hair, husk, or feather mattresses. The posts may be rested upon insulators made of thick glass sauce dishes, or the thick bottoms of tumblers. The doors and windows of the room should be closed to prevent draughts of air. There is no doubt but that lightning-rods lessen the danger from lightning when they are well insulated, and when the rods are run deeply into the damp ground, to conduct off the fluid ; if in poor repair, they increase the danger. Steam-pipes running through the house are good conductors of electricity ; on this account a wire or rod should be attached to them and run into the damp ground, as it will conduct the fluid safely away. The middle of the room and the first story of the house are the safest places. The fluid is apt to run down chimneys, smoke stacks, and the sides of the house if it is wet. A very unsafe place is that between the kitchen stove and the iron sink, for the lightning is apt to come down the chimney and jump to the sink. Avoid standing under trees, in open sheds, or in barns in which newly mown hay is stored.

Foreign Bodies in the Air Passages.—It sometimes happens that small things such as peanuts, grains of corn, beans, seeds of fruit, pebbles, buttons, bits of

food, etc., are drawn from the mouth into the throat or air passages by the act of coughing or laughing. Spasmodic coughing and great distress instantly follow. If the body is large, there is imminent danger of suffocation. The patient gasps for breath, the face becomes purple, the eyes protrude, he cannot breathe, and may lose consciousness. If the body is small, in fortunate cases and quite often it is thrown out by the act of coughing. In a case which the writer attended a piece of peanut was drawn into the bronchial tube. Coughing was severe at times for twenty-four hours, but was followed by convalescence and recovery. It is said that in some cases the symptoms are not very severe—depending perhaps upon what the particular part is in which the body lodges.

Treatment.—Send for a surgeon and inform him what has happened so he may bring proper instruments. It is always possible that the foreign body may be lodged in the back part of the throat, obstructing the entrance of air into the windpipe. If the patient is a child, invert the body at once so that the head and chest will hang downwards; then strike the back violently several times for the purpose of driving the breath forcibly out of the lungs and with it the foreign body; if this does not do it, open the child's mouth and thrust the fingers into his throat and try to find anything that may be there, and remove it by hooking it out with the fingers. This causes vomiting usually which helps to dislodge the body. Some surgeons advise to give snuff or tickle the

nostrils with a feather to produce sneezing to expel the body. In the worst cases surgeons perform laryngotomy (opening the windpipe) to save life.

Strangulation.—This term is applied to mechanical compression of the windpipe sufficient to stop the breath. Garroting, attempts at hanging with suicidal intent are examples of strangulation. Death results from *Asphyxia* or an insufficient supply of air to the lungs. If the chest walls are compressed by a falling embankment, or by timbers or other things, the result is the same.

The notorious grave robber and murderer, Burke, usually destroyed his victims by compressing the chest, thus preventing breathing. When the person is removed or rescued from these dangers before death really takes place, artificial respiration, as described in the preceding article, should be at once performed, as it offers the best means of saving life in this form of suspended animation.

Injuries from the Inhalation of Gases.—If the patient does not die immediately from these accidents, he remains in a condition of suspended animation or apparent death for a longer or shorter time, and possibly may be revived by proper treatment. These gases are usually considered poisonous, but when a fatal result is reached it is owing partly to poisoning and partly to true asphyxia or air hunger, and must be treated accordingly.

Sulphuretted Hydrogen is the product of decomposing animal matter. The foul odor of rotten eggs is owing to this gas. It is often generated in sewers and old drains. If large quantities are inhaled, insensibility results.

Carbonic Acid, or the di-oxide of carbon, is found in the bottom of wells, coal mines and in low damp places where organic matter is decomposing. In coal mines it is called choke-damp. Atmosphere containing one-tenth part Carbonic Acid, if breathed, will produce fatal results.

Charcoal-vapor is made up of carbonic acid, carburetted hydrogen, free nitrogen, etc., and the inhalation of it is dangerous. At first great languor is felt; afterward the patient falls into a fatal stupor unless he is rescued and immediately exposed to fresh air, and made to breathe artificially if natural respiration has stopped.

Smoke. A room may be filled with dense smoke when the house is on fire. Smoke contains suffocating and poisonous gases sufficient to stupefy a person remaining in a room filled with it.

Coal-vapor from ordinary burning anthracite and bituminous coal is sometimes inhaled in sufficient amounts to produce insensibility and death, unless prompt treatment is at once begun.

Coal-gas or illuminating gas. If the atmosphere of a room contains twelve per cent. of this gas, an explosion will happen if a lighted candle is brought into the room. Ignorance or neglect to turn off the gas, or leakage in

the pipe, are frequent causes of accidents. The inhalation of this gas produces effects different from the gases above named. Nausea, vomiting and dizziness, followed by convulsions, are the common symptoms.

Treatment.—Suffocation caused by breathing either of the above gases is rapidly cured by exposing the patient to fresh air, provided he has not been too long stupefied. It is recommended to dash cold water upon the exposed chest at once. If breathing seems to have stopped, artificial respiration, fully described on page 113, is about the only means of restoring the patient to life; he is suffering from air hunger as well as from poisoning.

HAS DEATH ACTUALLY TAKEN PLACE?

SIGNS OF DEATH.

“God’s club makes no noise, but when it strikes there is no cure for the blow.”—*Russian Proverb*.

“By medicine life may be prolonged, yet death will seize the doctor too.”—*Cymbeline*.

“Death is a black camel that kneels once at every man’s gate.”—*Arab Proverb*.

The fear of the possibility of being buried alive, which troubles the minds of many people, has urged medical and scientific men to discover some unfailing tests or signs of death. In some cases death may be so closely counterfeited that it is not easy to decide at once, and with certainty, that the body supposed to be dead is actually dead. Nothing more dreadful could be thought of than the mistake of burying a person alive. As it is sometimes necessary to decide in the absence of a medical man whether a person is really dead or not, we shall give below the most reliable tests and signs of death, and those that any intelligent person can apply. It is only in cases of suspended animation that reasonable doubts arise, for when the case is one of ordinary sickness, gradual failing and apparent death, there is not one chance in a million of revival after a brief time.

The startling stories we hear and read about persons being buried alive are without foundation in fact; they are kept alive by superstitious fear, and the great credulity of ignorance.

Dr. Dulles, of Philadelphia, says on the subject of this fear :

“The stories upon which it rests are such as an excited imagination might easily invent, and natural fear propagate, but they do not bear critical investigation. In certain European cities, for many years, the bodies of hundreds of thousands of those supposed to be dead have been placed in rooms where ingenious appliances and careful watchings have been used to detect the slightest evidence of life, and not in a single case has a mistake been found to have been made.”

If the heart has stopped beating, or if the breathing has actually stopped for one minute, or possibly a little more, the person is really dead ; but the pulsations of the heart and the respiratory act may be so feeble, that by an inattentive person they would not be observed. The following tests and signs are believed to be the best and principal ones known up to the present time.

Let a thread or cord be wound tightly around the finger a little distance from the end. If there is life and consequently circulation of the blood, the end of the finger will after a while become a little swollen and purple in color compared with the other parts of it.

Listen over the region of the heart for the least sound of beating ; after listening attentively for some time and not hearing a sound, it is presumptive evidence that there is no life ; but one might be mistaken about this.

If your own hand or the hand of a living person be held before a bright light, with the fingers pressed together, a beautiful pink color will appear between the fingers ; the blood is circulating in the skin ; in the hand

of a body not living, no such color can be seen—nothing but a dead-white.

To test for breathing, hold a flake of cotton-wool or a feather-down before the mouth; even slight breathing imparts a wavy motion to it. A dry mirror may be held over the face; if no moisture collects upon it, it may be inferred that life has departed, for if there is feeble breathing, moisture collects from the exhaled air.

Another test is to place a plate or other vessel filled with water upon the chest. If there is the slightest movement in breathing, there will be a change in the reflection and surface of the water.

If, in a living body, the flame of a candle, or piece of iron brought to red heat be held near the skin for a short time, a water-blister or vesication will be raised. In the dead body the skin will only be shrivelled and blackened. In real death the thumb is drawn in upon the palm of the hand, and the fingers flexed upon it, while in seeming death the thumb remains free and extended.

A reliable test can be made by means of the galvanic battery, which, of course, would be convenient only for undertakers and physicians. Contractions and spasmodic action of the limbs will take place when the battery is applied to them within three or four hours following actual death; after that time no such action can be produced, everything will be as “still as death.” Therefore, when the battery applied six or eight hours after supposed death produces contraction of the limbs, further investigation should be made, for there is presump-

tive evidence of life. All the above tests can be applied within a few hours after supposed death.

In case of real death, after twenty-four hours, or less, certain changes in the body take place, which, when present, may be regarded as positive proofs of death. One of these changes is what is called in medical language *rigor mortis*, which means that the limbs, the neck, and other parts of the body are rigid and immovable, unless considerable force is used. This usually takes place in from ten to twenty-four hours after death. It should be remembered that this rigidity does not always last a long time; a body in which *rigor mortis* had been previously well marked, might not be rigid thirty-six hours after death. In cases of drowning the rigidity should not prevent attempts at resuscitation. If the body be kept a sufficient length of time, infallible signs appear, namely, the beginning of decomposition, which may be first seen over the abdomen, as a green discoloration of the skin beginning about the third day. If no such discoloration or signs of decomposition can be found as late as the third day after supposed death, it would be presumptive evidence that life is only suspended—that death had not really taken place; further time would be required to make sure.

Injuries from Severe Cold.—The first effect of continued exposure to extreme cold is a sense of pain. If the exposure continues for a long time, a feeling of numbness creeps over the body, the person no longer

suffering pain ; if walking, he may stagger in his gait ; he cannot speak distinctly and perhaps he is wandering in his mind ; a strong inclination to sleep now steals over him which he cannot resist, and to sleep is to die. Several things increase greatly the dangers of exposure to severe cold. Among these are hunger, fatigue and mental depression ; but more than these a drunken state renders the person extremely liable to die from the effects of cold. It is said that “after a public fête in St. Petersburg, during which an unlimited supply of spirituous drink was placed at their disposal, 1,800 persons perished from cold in the streets and squares of that city.” In that celebrated retreat of the French Army under Bonaparte from Russia after the burning of Moscow is the most remarkable instance in history of death and suffering from intense cold. Many thousand men, half starved, fatigued and disheartened perished from cold and frost-bites. Yet it is a fact that a well-fed person, in good health and spirits is able to bear exposure to intense cold without harm under certain precautions. Dr. Kane and his men during his Arctic voyage lived, and a part of the time out of doors, when the temperature was from 50° to 70° below zero. Chilling of the body may take place so insidiously that one may scarcely be aware of it, especially if he is in poor health or exhausted. Still cold is much less dangerous than when accompanied with wind which rapidly increases the evaporation from the surface of the body.

Frost-bites and Freezing of Limbs are the most com-

mon injuries from exposure to cold. Feet, toes, heels, fingers, the nose, ears and cheeks are often frozen. There is always the warning sign of danger—a stinging pain in the part about to be frozen. Before the part is frozen it becomes pale, bloodless and without sensibility, and if the first sensation of pain is not heeded, the toes or the feet may be frozen before the person is aware of it.

Treatment.—When a person has been overcome with cold, is insensible and nearly frozen to death, he should not be brought immediately into a hot room, but into a moderately warm one. The skin should at first be vigorously rubbed with cloths dipped in spirits, or in vinegar, followed by friction with hot dry flannels till reaction takes place. As soon as the patient can swallow, stimulants such as strong coffee or the aromatic spirits of ammonia or alcoholic spirits should be given. If the person does not breathe when first found, artificial respiration may be required. Frozen or frost-bitten feet, hands, fingers or toes should be immediately plunged into cold water for awhile, then gently rubbed with soft flannels; for such parts as the ears or nose cloths wet in cold water may be applied, or rubbing the part in snow is good treatment. If the frost-bite afterward seems swollen and tender, the frequent application of the spirits of camphor, or a solution of the sugar of lead is of great benefit. Some surgeons recommend poulticing.

Chilblains are common in children. One of the best

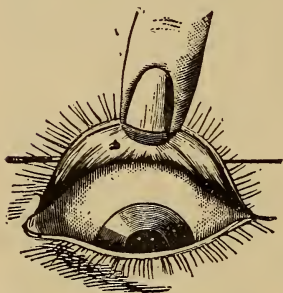
things to do is to paint the part twice a day with weak tincture of iodine. Plunging the feet into water as hot as can be borne affords relief, but it should be followed by wrapping the feet in cloths wet with laudanum or with a solution of the sugar of lead. Wrapping the parts in cloths saturated with the essence of peppermint often affords great relief.

Precautions.—If a person is obliged to expose himself to severe cold, he should eat plentifully of fat meats, butter or cheese and other nourishing food. It is unsafe on scientific grounds to drink freely of alcoholic spirits before continued exposure to cold; the final effect is to lower animal heat and to lessen greatly the power of resistance. Beware of riding across prairies or large lakes in very cold days or nights; it is a dangerous thing to do; one gets chilled before he knows it.

Things in the Eye.—It is a very common accident to get small objects into the eye. It is bad practice to rub the eye because it feels badly; cover it with a handkerchief, or if at hand with a cloth saturated with hot water. There is always a copious flow of tears, which often floats the foreign body out upon one of the lids, when it can be wiped off. If it lodges, it is apt to be under the upper eyelid.

Treatment.—Take, with the thumb and fingers, the upper lid, pull it away from the eyeball and stretch it down over the lower lid, allowing it to draw back so that the eye-lashes of the lower lid may brush off the

object from the inner side of the upper lid. The operation can be repeated if required. If this does not do it, the upper lid must be turned back in this way: Take a small pencil and press in between the eyeball and



socket, then with the thumb and fingers turn the upper lid inside out. If anything is lodged on the lid, it can be seen and wiped off. If a piece of steel, glass, or anything else is embedded in the eyeball this will not remove

it; the patient should visit a surgeon.

Pieces of lime or other kinds of alkali sometimes get into the eye; if so, pour vinegar diluted with water into the eye to neutralize the alkali. If acids get into the eye, wash it in soda-water, or in lime-water. A magnifying glass is of great assistance in looking for small objects in the eye, or on the lids. It frequently happens that a patient thinks, after something has been in the eye, that it is not all out when it is. A little roughness (a slight wound) remains, which gives nearly the same sensation that a foreign body does.

Very much irritation and pain are apt to remain in the eye after the foreign body has been removed. This calls for applications of cold water or cold tea. An excellent remedy to allay the irritation is prepared in this way: heat a cup and turn into it a little laudanum. The alcohol is evaporated and a jellylike mass is left. Add

to this a little water to make it thin, and pour a little into the eye every hour; or a thin mucilage made from pure and clean gum-arabic may be poured into the eye.

A troublesome irritation of the eye is sometimes caused by a hair turned inward from the eyelid. It must be pulled out with a pair of forceps or tweezers—not broken off, for the irritation would be increased.

Things in the Ear.—The length of the ear canal is about one inch and a quarter, and at its inner extremity is a delicate membrane, the tympanum, or drum of the ear. If foreign bodies get into the ear, and are allowed to remain, they may produce serious inflammation, destroy the drum, and cause deafness. Insects, fleas, and bugs in the ear are very annoying, but they can be removed easily. Grains of wheat, seeds, gravel stones, etc., are more difficult to remove. If allowed to remain two or three days, there is a discharge from the canal which soon becomes bloody and purulent. Rough efforts to get them out might rupture the delicate tympanum, and cause permanent deafness.

Treatment.—A surgeon recommends, to remove insects, to stuff into the ear “a piece of cotton-wool, thoroughly saturated with a strong solution of salt or vinegar, and large enough to fill the orifice. After its introduction, turn the patient on the affected side, and allow the hand to press firmly on the ear. In a few minutes the noise and irritation will cease, and, if the

plug at this time is withdrawn, the insect will probably be found partially embedded in its substance."

Another method is to fill the ear with oil, and thus float the insect out. Larger bodies may sometimes be removed by syringing the ear while the head is held down—the operation should be done gently. A fine wire bent into a loop is a good instrument to remove anything from the ear. Generally, the patient should be taken to a surgeon.

Things in the Nose.—Children often get small bodies into the nose, such as buttons, peas, beans, etc. There are several ways of removing these things.

Treatment.—The nostrils may be tickled with a feather, or snuff may be given to produce sneezing. When the child is about to sneeze, press one nostril tightly together, to allow air to be forced through the other in order to expel the intruder. If beans or peas remain for twenty-four hours they swell, and cannot be removed without the use of forceps or tweezers. A small wire bent up into a loop will sometimes be of good service in removing small things.

Things in the Throat. Choking.—This is usually caused by attempts to swallow large pieces of food which stick in the throat. The person has a feeling as of strangling, he cannot breathe well, and if the body is not soon thrown out he becomes black in the face. A tipsy Irishman, eating at a table with others,

in trying to swallow a large piece of meat was strangled and in imminent danger. A stranger at the table seeing the emergency, without waiting for an introduction, struck the sufferer a powerful blow on the back, which knocked the breath out of him and the meat, too. The Irishman was too tipsy to appreciate such impromptu, though scientific treatment, and threatened his skilful benefactor with severe punishment. Some surgeons advise to stand a choked person facing a wall, his chest resting against it, and strike him a powerful blow on the back. The patient himself should thrust his fingers down his throat, and pick out, or hook out, the foreign body. If he cannot do it himself, a bystander should immediately undertake it. No risk or danger attends such an operation, and the offending body can generally be removed in this way. Another method is to hook out the body with a small wire bent up into a loop. If the patient is a child, it is advised by some to invert the body before attempting to remove a foreign body from the throat. If the thing which sticks in the throat is not too large, and is a piece of food, it may be pushed down into the gullet, or passage to the stomach.

Things Swallowed.—Children occasionally swallow marbles, coins, buttons, pencils, and a great variety of things. Generally they make the entire and crooked journey through the alimentary canal safely, and without much inconvenience to the patient, and are discharged with the natural contents of the bowels in from

two days to a week. The insane, the delirious and the hysterical sometimes swallow a variety of indigestible things, and, ostrich-like, seem to relish the food. If the foreign body does not readily pass, and even when it does, the earliest symptom is pain in the stomach, shooting thence in various directions. Nausea and vomiting bloody mucus sometimes happen. The foreign body is apt to be arrested at the place where the small intestine opens into the large one, just above the groin on the right side of the bowels. In this event one of two things happens: it either ulcerates through, or an abscess forms at the place of lodgement.

Pins, needles, pieces of glass, etc., frequently pass through the stomach and bowels, doing no harm; in other cases they stop on their way, and begin to ulcerate through the tissues of the body, and at last may appear externally, and can be removed. Some very ugly things have been swallowed: breastpins, plates of false teeth, small knives, etc., in some cases causing death; in other fortunate cases, the foreign body, after a long time, makes its exit. We quote the following from Dr. Holmes' System of Surgery:

“There is nothing more frequently swallowed and that intentionally, than pieces of money. The swindler in the streets of London, in the habit of passing false coin, when detected in the act, will invariably attempt to swallow the piece, and will generally succeed in the attempt, even if it be the size of half a crown. No evil effects occur in such instances. The treatment pursued by the man is peculiar and not irrational. He avoids purgative medicine (physic) as worse than useless. On

the other hand, he has recourse to a constipating diet, and feeds for some days on hard boiled eggs and cheese, in excess. His theory is, the more solid and copious the contents of the bowel, the more sure is the piece of money to be caught in the passing feculent matter, and thus will be more readily propelled onward to the external outlet."

Treatment.—The first thing most persons would do, in case a child had swallowed a coin or any such foreign body, would be to give a dose of physic. Such practice is wrong and does more hurt than good.

It is much better practice to feed the child freely on coarse bread and much fruit, in order to fill the intestines and sweep the foreign body along through them. If the bowels remain constipated, on the fourth or fifth day a dose of castor oil may be given. Should the thing swallowed be large or very irregular in shape, some constipating food, such as toasted cheese, may be given.

Teeth Knocked Out.—It frequently happens that several teeth are knocked out from a fall or from some other injury, but it is not generally known that they will, if returned, become quite firm again in the socket and remain a long time useful. They should be taken to a dentist who will push them back in place. They may be fastened in place by a silk thread tied around the other tooth. Even if the upper part of the socket is broken the tooth should be returned, for they may "grow in."

Sunstroke or Heatstroke.—This subject is an important and practical one. Cases of Sunstroke are common during the heated season, and they call for prompt and intelligent treatment. The danger from these attacks is considerable. If sunstroke does not prove fatal within a few hours, it often leaves the patient in a bad condition of health. He may not be able thereafter to bear any exposure to the rays of the sun in summer, or he may suffer from almost constant headache, or from irritability of temper, loss of memory, partial paralysis, partial blindness, etc. The general health may be seriously impaired, or the person may lose his mind or become insane. Exposure to intense artificial heat has the same effect as exposure to the hot sun; on this account it is called heatstroke. There are three well marked varieties of Sunstroke, which we briefly explain:

First. Heat fever. From exposure to intense sun-heat or artificial heat, a person may be struck down, and remain in an unconscious, or in a semi-conscious condition, with burning heat of the skin, which is usually dry. The temperature of the body is high, 104° to 110° F. The breathing is hurried and gasping. The face, head, and neck may be purple or red from obstructed circulation. The pulse varies; generally it is full, heavy and slow, or quick and jerking. There may be spasms, convulsions, or delirium. In many cases the patient falls into a profound coma, from which he cannot be aroused.

Second. Failure of breathing. The nerve centers which control the breathing are overwhelmed by intense heat, and the patient dies for the want of breath, and from failure of the heart. The patient is unconscious; the skin is cool, and the pulse feeble. He appears very much like a person suffering from a Shock. Recovery, partial or entire, may take place.

Third. Heat exhaustion, or syncope (fainting). Great depression of the nervous force and of muscular power may occur while a person is exposed to heat, if he is fatigued or has over-exerted himself. A condition similar to fainting follows. The skin is pale, cool, and moist, the pulse quick and feeble. Death may take place from heart failure, or the patient may soon rally from this condition.

We are aware of the danger of confusing a subject by making too many fine distinctions, but it seems necessary that these different varieties should be recognized. They are the key to treatment. The usual directions, to dash cold water upon a person suffering from sunstroke, if followed in a case of heat fever would be good; but if the person was suffering from heat exhaustion, such treatment would be positively harmful, and worse than no treatment. Perhaps the only distinction that can be plainly made will be that the patient's skin is intensely hot, and that his pulse is full and strong. This would throw the case into the first class (heat fever), and plainly call for the cold water treatment. The premonitions may be slight, or wanting in some cases. Dr.

Swift thus describes the attack: "The patients are suddenly seized while in the performance of their labors with pain in the head, and a sense of fulness and oppression in the epigastrium (region of the stomach) occasionally nausea and vomiting, general feeling of weakness, especially of the lower extremities, vertigo (dizziness), dimness of vision and insensibility. Surrounding objects appear of uniform color."

The attack may be slight, the patient remaining insensible for a brief time only, or he may become comatose. In the forms characterized by great heat of skin, the pulse is at first usually full and strong, but if the case proves fatal, the pulse becomes rapid and feeble. It has been thought of late that one who remains quiet when exposed to heat is more likely to suffer from heat-stroke than he is while in motion. This case seems to show it: A boy falling asleep in the sun, while the mercury stood at only 88° F. in the shade, soon became unconscious, and, although efforts were made to resuscitate him, he died. Another case illustrates the effects of artificial heat. A person fourteen years old, suffering from a rheumatic disease of the knee joint, was induced by a quack doctor to submit to his treatment. He was placed in bed, wrapped in a sheepskin taken from a sheep just killed, and packed about with loaves of bread fresh from the bakery. The person became unconscious after a short time, and died in three hours, probably from the effects of heat while in a fixed attitude. Though it may be true that a person remaining

quiet when he is exposed to heat is apt to receive a stroke from heat, yet violent exercise in a heated apartment or in the hot sun is attended with great danger. One who is perspiring is in less danger than he is if his skin is hot and dry.

Treatment of Sunstroke.—Examine the patient carefully to find whether his skin is very hot and dry, and whether the pulse is full and bounding. When this is plainly the case, cold water should be poured upon him, upon his face, head, neck and body, in order to cool the superheated body as soon as possible; or, if the conditions favor, the clothing may be rapidly removed, and the patient laid on the floor, upon a blanket with a sheet thrown over him. From an ordinary sprinkler cold water may now be poured over him till the skin becomes cool; then he should be rubbed dry and placed in bed. When there are good facilities, a person may be placed at once in a cold bath. If, after the temperature is reduced, there is exhaustion and a feeble pulse, stimulants in small amounts are called for. Such is the treatment of a typical case of heatstroke, when the animal heat is unnaturally high. In sharp contrast to this treatment is that required in cases of heat exhaustion, fainting or syncope, from exposure to heat, when the skin is cool and moist, and the pulse feeble and rapid, when the bodily temperature is not abnormal. Cases of this kind frequently occur from exposure to heat. The heart and the nervous system are depressed. Rest and quiet in a cool place, and mild stimulants are indicated;

cold water should never be used, except on the head if it is hot and aches.

Precautions.—If one is working in a heated apartment, or is exposed to the hot rays of the sun, he should give instant heed to the premonitions of danger, which are a peculiar headache or a feeling of pressure in the head, weakness and langor, oppression at the pit of the stomach, nausea, weakness of the legs, disturbances of vision, etc. If these warnings appear, the proper thing to do is to retire to some cool place, bathe the head in cold water and avoid further exposure. The use of alcoholic drinks predisposes to sunstroke; persons addicted to it must beware of continued exposure to heat. Black clothing, as a matter of precaution, must not be worn on hot days. There is more danger in hot, damp days, than in hot, clear days. It is beneficial in a heated term to drink freely of cold water (not iced). It promotes perspiration and helps to keep the body cool. Violent exercise, if long continued on hot days, is dangerous. If one is obliged to work in an overheated room, always arrange to have a draught through the room. A person who has once suffered a sunstroke must be extremely careful thereafter about exposure to heat.

POISONS AND POISONING.

Directions for the prompt treatment of cases of poisoning should have a conspicuous place in a book of this kind. There is, perhaps, no emergency in which a little knowledge and immediate action are more urgently required. Time spent in waiting for a doctor, unless he is near at hand, is costly; it may cost the patient his life.

So many poisonous substances are now used in the arts and manufactures, are kept in the house as medicines, and are so often taken with suicidal intent, that cases of poisoning are not infrequent.

“What to do first” is in many cases plain and simple, and the medicines and means needed are often at hand. Too many fine distinctions and directions for the use of chemical antidotes only encumber and confuse the non-medical mind; we therefore give plain directions, and describe the use of common remedies for the prompt treatment of acute poisoning.

Most poisonous substances may be, for practical purposes, divided into two classes,* namely:

1. Irritant Poisons.
2. Narcotic Poisons.

1. *Irritant Poisons* are those which irritate, burn, or destroy the parts with which they come in contact. If

* There are certain poisons which cannot strictly be placed in either of these two classes; they partake somewhat of the nature of both kinds; they are called *Acro-narcotic poisons*.

a person previously in good health, after eating or drinking, should be seized almost instantly with nausea, vomiting and purging, and with great distress or burning pain in the stomach and bowels, attended with great prostration, there would be grounds for suspicion that he had swallowed some irritant poison. If the name was not known, the symptoms would indicate its nature. The most common irritant poisons taken by mistake or with suicidal intent are *Arsenic* in its various forms, such as the *white powder*, *Paris green*, *Scheele's green*, *Rough on Rats*, or other rat poisons; the preparations of *Mercury*, such as *corrosive sublimate*, *red precipitate*, and *vermillion*; the *sugar of lead* and *red lead*; the *strong acids*; *nitric*, *sulphuric*, *muriatic*, *oxalic*, etc.; the *strong alkalis*; *caustic potash*, *soda*, *lime*, *lye*, and the water of *ammonia* and liniments containing the latter.

2. *Narcotic Poisons* produce effects entirely different from the irritants. The patient does not feel pain; he gradually becomes dull and stupid, and may fall into a stupor, from which he cannot be aroused. The common narcotic poisons are *opium* and its preparations, *belladonna*, *aconite*, *henbane*, *digitalis*, *strychnine*, *chloral hydrate*, *alcohol*, *ether*, *chloroform*, etc. Of these, opium and its preparations are by far the most common poisons of this class.

The following arrangement shows in juxtaposition these differences in symptoms:

IRRITANT POISONS.

Effect immediately noticed.
 Burning pain in the throat and stomach.
 Nausea, vomiting and purging almost constant.
 The first effects are local—in the throat and stomach.
 Faintness or Shock present to some extent, but mind clear.

NARCOTIC POISONS.

No immediate effect.
 No pain; freedom from previous pain.
 Nausea and vomiting uncommon.
 The first effects are constitutional.
 Often stupor and insensibility, or confusion of mind.

General Treatment.—1. *Unknown Poisons.* If, after eating or drinking something, symptoms of poisoning come on, the first and most sensible thing to do is to empty the stomach of its contents at once. *Compel* the patient to drink large quantities of tepid water, then thrust the finger or a feather down the throat; if this does not provoke copious vomiting, stir a tablespoonful of ground mustard, or two of salt, in a cup of water, and give, repeating every ten minutes till vomiting takes place. If the Sulphate of Zinc is at hand, give one-half teaspoonful doses in water every ten minutes; this is the best. Syrup of Ipecac may be given freely. This can be done while somebody is running in great haste for the nearest doctor. If there is great prostration, cold extremities, pallor, and a cold sweat upon the skin, the patient is in a condition of Shock, and needs warmth to the skin and stimulants. Strong tea or coffee, without milk or sugar, answers a good purpose, for either is a good antidote to many poisons. But the symptoms will generally indicate to which class the poison belongs.

2. *Irritant Poisons.*—When the poison swallowed is

known to be an irritant, or when the symptoms plainly show that it is, the best treatment is to fill the stomach with some liquid that will absorb and dilute the poison ; then by emetics, elsewhere described, thoroughly empty the stomach, after which bland drinks may be given for the purpose of soothing the irritated lining membranes. Magnesia, powdered chalk, plaster, charcoal, or whitewash scraped from the plastering and stirred into water act as absorbents.

3. *Narcotic Poisons*.—When it is known that a narcotic has been taken, or when the symptoms indicate it, the treatment should be entirely different, excepting in one particular : vomiting should be immediately induced the same as above, for the purpose of getting all the poison possible out of the stomach. The danger from narcotics is that they may so oppress and stupefy the brain, nervous system, or heart, that death may take place on this account. Stimulants and warmth are generally needed.

Special Treatment.—Opium, Laudanum, Morphine, Paregoric, and Soothing Syrups are guilty of producing the majority of the cases of narcotic poisoning, because they are common medicines, and often taken in overdoses. Old people and infants are very susceptible to their poisonous effects. After an overdose the patient, if previously in pain, gets easy, and gradually falls into a deep sleep, from which it is difficult to arouse him. The pupils of the eyes become narrowed to a “pin hole.” The patient sweats, and his breathing grows very slow.



A New York druggist has suggested that a human skeleton be placed at the prescription counter, to remind the compounder of medicines constantly of the possible results of carelessness in the use of poisonous drugs.

There is then great danger. Give an emetic and send for a doctor. Give strong coffee repeatedly. Whip the patient's bare arms and legs to produce pain, which is the best antidote. Keep the patient awake, if possible, and walk him round in the open air.

Arsenic is an irritant poison, and in some form is probably the poison most frequently given with criminal intent; it is often taken accidentally. This is partly because it is almost tasteless. Arsenic is also used as a medicine, often in the form of Fowler's Solution. Scheele's green is the coloring matter in wall-paper, artificial flowers, candy, paper boxes, toys and knick-knacks. Paris green is extensively used by farmers in killing potato-bugs. Fly-papers and rat-poisons contain arsenic. Realgar and Orpiment also contain it.

The symptoms of poisoning come on in from a few minutes to an hour after the poison is taken, and are at first a burning pain in the throat, gullet and stomach, followed by vomiting, pain in the bowels, purging, intense thirst, coldness of the extremities, cold sweats, cramps, weak and irregular pulse, and Shock.

Treatment.—Give large draughts of warm water, which assist vomiting; emetics are not needed if free vomiting occurs at once, spontaneously.

After vomiting, a large dose of castor oil should be given. If not at hand, some other oil may be substituted. A mixture of chalk or magnesia and castor oil is highly recommended. The hydrated sesquioxide of iron

is considered the best antidote ; it can be obtained of any druggist.

Strychnine or *Nux Vomica* has an intense, bitter taste. It is used as a medicine. Dog buttons contain strychnine. After the lapse of from two to twenty minutes, unmistakable signs of poisoning are seen, if the poison is swallowed.

At first a stage of restlessness and excitement, and a sense of choking or suffocation ; vomiting does not usually occur. Jerkings of the head and limbs soon set in ; in a moment the whole body is stiff and rigid. The limbs and different parts of the body become tense and fixed. Lockjaw is common. The symptoms are so plainly marked that a case is easily known.

Treatment.—The stomach should be emptied of its contents immediately with some emetic. Large doses of bromide of potassium are recommended. The patient should be kept away from all noises and draughts, and should be touched or handled as little as possible.

Belladonna, Atropia (deadly-nightshade) is in common use as a medicine, and is highly poisonous in large doses. The pupils of the eyes are widely dilated (opium contracts them) ; the throat is dry, and there is great thirst ; the face becomes dusky red ; the patient cannot see well ; there are hallucinations, and a busy and merry delirium ; in severe cases coma comes on. Recovery often takes place if the dose is not very large.

Treatment.—Empty the stomach immediately. Give large doses of lime water, chalk, or charcoal ; if the

skin is cool and the circulation fails, apply artificial heat and give stimulants. Opium is considered by some an antidote.

Hyoscyamus (henbane), *Conium* (poison hemlock) *Stromonium* (thorn apple, jimson weed), are all used as medicine and cultivated as ornamental plants; they are poisonous in overdoses, with effects almost identical with those of *Belladonna* described above. The treatment is the same.

Digitalis (purple foxglove) is poisonous in large doses. It produces a feeble and fluttering pulse, faintness, nausea, vomiting and stupor. Stimulants, such as ammonia, brandy, coffee, etc. should be given and external warmth applied to the body.

Solanine. This poisonous substance is mostly found in the buds and green fruit of potatoes and in unripe and diseased potatoes; the effect of the poison is the same as that produced by belladonna; the treatment the same.

Toisonous Plants.—There are other wild and cultivated plants which when eaten produce narcotic poisoning that must be treated as described above.

Tincture of Aconite (monkshood) is kept in many houses as a common remedy for colds and feverishness. It is a subtle and deadly poison in a large dose—one teaspoonful for instance. Children are poisoned by chewing the leaves of monkshood. The effect of the poison is to weaken and slow the action of the heart. After swallowing a large dose there is burning in the throat

and stomach and soon a tingling and numbness is felt over the body. The pulse becomes slower than natural. There is no real antidote. At first give an emetic, then tablespoonful doses of powdered charcoal, and follow by stimulants. Keep the patient very quiet and on no account allow him to sit up or try to walk because there would be danger of fatal syncope or heart failure. Stimulants are plainly needed when there is a tendency to heart failure.

Oxalic Acid is a deadly poison destroying life in a short time when taken internally in considerable amount unless vomiting is immediately induced. It is sometimes mistaken for Epsom salts. Oxalic Acid when swallowed causes pain in the throat, gullet and stomach.

Treatment.—An emetic should be taken and assisted in its action by large draughts of tepid water. Powdered chalk, magnesia or whitewash scraped from the ceiling and mixed with water may be taken in large quantities.

Strong Acids.—If a person drinks by mistake a strong acid he will find it out immediately. He should drink immediately a cup of water with much soda, saleratus, magnesia, lime-water or whiting stirred into it, or if nothing else is at hand soft soap and water is better than nothing. Vomiting should be induced, after which give the whites of eggs freely.

Tainted Meat or Fish, Sausages and Cheese, and other kinds of food sometimes produce symptoms of poisoning. The recently discovered substance called *Ptomaine*, the product of putrefaction, is supposed, at the present

time, to be the poison in such cases. The symptoms are very much like those noticed in cases of cholera morbus. Emetics or active physic is the proper treatment at first; perhaps an opiate will be needed to allay the pain.

Mushrooms (toad stools).—These to some people are a delicious food, but some varieties are poisonous and can be known by their dark color, acid bitter taste, pungent odor, and from the fact that they grow in damp dark places. Symptoms of poisoning come on after an hour or two, such as drowsiness, dizziness, dimness of sight, delirium, colic pain, vomiting and purging. The treatment is the same as that for tainted meat poisoning above described.

Poisonous Vegetables.—Rotting or unsound vegetables or fruits eaten in considerable quantities, and in hot weather, infrequently produce poisonous effects, such as pain, vomiting and diarrhœa. The symptoms are nearly the same as those observed in tainted meat and fish poisoning.

If the offending substance is not ejected from the stomach by the act of vomiting, an emetic should be given, followed by a Seidlitz powder or a dose of castor oil. When the pain is very severe it better be controlled by a few doses of paregoric or some other anodyne.

Alcohol, in sufficiently large doses, is a poison, from the effects of which a person may die. It should be known that there is considerable danger to life when a

young person is profoundly intoxicated or poisoned with alcohol.

Treatment.—If a person is found soon after drinking large amounts of spirituous liquor, and is in a condition of “rum coma”—dead drunk, an attempt should be made to produce vomiting by the use of emetics. If the patient can be compelled to drink warm water, large amounts should first be given. After vomiting, give aromatic spirits of ammonia every one-half hour and apply iced-water to the head. Slap the bare legs with a wet towel.

We give below in tabular form the antidotes and treatment for common poisons, selected in part from a table in the *Scientific American*.

POISONS.	ANTIDOTES.
Acid—Carbolic, sulphuric, nitric, muriatic, nitro-muriatic, creasote, iodine, phosphorus.	White of egg well beaten up with water. A teaspoonful of mustard flour in a cup of hot water. Very thick lime-water—(in case of sulphuric, nitric, muriatic or nitro-muriatic acids).
Chromic acid, chromates, all preparations or compounds of chromium, antimony, copper, mercury or zinc.	Abundance of white of egg in water. A teaspoonful of mustard flour in water. Copious draughts of an infusion of salt herbs.
Ammonia, soda, potash, alkaline, silicates and sulphates.	Strong vinegar and water. Large doses of oil. Large doses of milk.
Prussic acid and its salts, all cyanides and sulpho-cyanides, oil of bitter almonds and nitro-benzine.	Continuous and heavy douches of ice-cold water over the head and spinal column. Mustard plasters on the stomach and soles of the feet. Prevent sleep.
Ether, petroleum, benzine, fruit essence, concentrated or absolute alcohol.	Plenty of mustard flour in large quantity of hot water. Cold-water douches. Fresh air. Prevent sleep absolutely.
Compounds of baryta and lead.	A teaspoonful of mustard flour in warm water. Strong solutions of Epsom salts and Glauber's salts in cold water.

POISONS.

ANTIDOTES.

Compounds of arsenic, White powder, Paris green, Scheele's green, Rough on Rats.

A teaspoonful of mustard flour in warm water. A teaspoonful of dialysed iron mixed with the same quantity of calcined magnesia every five minutes for one hour. Then plenty of oil, or milk, or some mucilaginous tea, say linseed.

Oxalic acid and its salts.

Very thick paste of lime and water by large spoonfuls at a time. After several of these, large draughts of lime-water. Finally, 4 ounces castor oil.

Nitrate of silver

Large doses of ordinary kitchen salt dissolved in water, after which one teaspoonful of mustard flour in warm water.

Nitrous fumes of vapors, arising in vitriol or chemical works.

Frequent and small doses of strong acetic acid—the stronger the better.

Opium, laudanum, morphine, paregoric, and soothing syrups.

Emetic, if poison just taken, then strong coffee; slap the bare skin with towel wet in cold water, to produce pain, keep the patient awake and walk him round; artificial respiration.

Belladonna (deadly nightshade), Hyoscyamus (henbane), Digitalis (fox-glove), Conium (poison hemlock), Stramonium (thorn apple).

Give emetic first, then powdered charcoal. Stimulants if rapid failing.

Tainted meat or fish, poisonous vegetables, mushrooms.

Give an emetic, then castor oil or Seidlitz powders.

Strychnine, Nux Vomica.

Give an emetic, then a large dose of castor oil.

Corrosive sublimate, tartar emetic, bed-bug poison.

Emetics, whites of eggs, strong tea or coffee.

Sugar of lead.

Provoke vomiting, then give Epsom salts.

Noxious gases, carbonic acid gas, carbonic oxide, carburetted or sulphuretted hydrogen, vapor of chlorine, etc.

Fresh air, if stupor dash cold water on the body, artificial respiration.

Precautions.—All medicines known to contain poison should be thrown out as soon as what is needed has been used. All bottles containing laudanum, tincture of aconite, ammonia, carbolic acid, sulphuric acid, oxalic acid and so on, should be plainly labelled poison. It has been suggested that peculiar looking labels be put

on such bottles. Druggists put on the skull and cross-bones-sign. One in a hurry might easily mistake these poisonous liquids for something else ; such mistakes are of too frequent occurrence.

Generally, one should "go slow" in swallowing the contents of vials not labelled. Liniments containing poisonous ingredients are quite often taken by mistake.

Great care must be observed in giving opiates to aged persons and to children. As soon as pain is relieved, and a sleepy, dull condition comes on, the medicine must be omitted and the patient watched. Beware of giving large amounts of soothing syrups to infants.

Ice-cream Poisoning.—Cases of this are not very common, but they do occur. Whole families, and large numbers of picnic parties, have been poisoned in this way. In a daily paper of yesterday the following item appeared :

"At a picnic given at Pilot Point, Texas, yesterday, a large number of people were poisoned by ice cream made poisonous by staying too long in the cans. Fifteen persons will die."

Great differences in the cases with respect to severity are noticed. Some are mild, recovery taking place in a short time ; others are very severe and terminate fatally. Just what the poison is, or how it gets into the cream, has been a difficult question to settle and perhaps it is not yet fully settled. The poison was supposed at one time to be vanillin, at another time, zinc, resulting from some chemical or galvanic action upon the zinc of the

freezer. At the present time the majority of physicians are agreed, we think, that the poison is *Ptomaine*, which is the product of putrefactive changes in the milk from which the cream is made. It is thought by some that the cream or milk is tainted, and that putrefaction is started by neglecting to cleanse the freezer thoroughly.

The symptoms of poisoning do not generally come on till an hour or two has passed after eating. There is at first a feeling of pressure or fulness in the stomach and sometimes dizziness and faintness to which pain, nausea and generally vomiting are added. Diarrhœa is also a common symptom. The attack appears very much like a case of *Cholera Morbus* when severe. Other cases are so mild that there is little resemblance.

Treatment.—When there is suspicion that a poisonous ice-cream has been eaten, if spontaneous vomiting has not already taken place, an emetic should be immediately taken and followed by some active cathartic. In case pain is very severe and persistent, it should be controlled by some anodyne. No specific antidote is yet known. The purpose of treatment is to remove the poison from the stomach and bowels, and to allay the irritation.

Ivy Poisoning.—Many persons are so susceptible to this kind of skin poisoning that they cannot walk among the plants or vines or even pass where they are growing abundantly without harm.

There are two kinds of plants which produce it.

1. The *Poison Ivy* vine.—This resembles the ordinary

woodbine, climbing in the same way over walls, fences and trees. It may be distinguished by bearing in mind the very simple rule that the harmless vine has five leaves on a stem, while the poison ivy has but three. The poison ivy grows also as a small, branching herb, with green shining leaves. Between this and the vine there are many intermediate grades. In the autumn the leaves take on variegated and beautiful colors.

The Poison Oak, known also as the *poison sumac*, *swamp sumac*, *dogwood* and *poison elder*. It must be distinguished from the common sumac of uplands, which is harmless. The poison sumac is a tree six to eighteen feet high, bearing dark green, pointed, shining and smooth leaves. The flowers are small and greenish; the berries greenish white or yellow. The berries of the harmless sumac are always crimson red. The leaves of the swamp sumac in autumn are more brilliant and beautiful than those of any other tree.

The eruption from such poisoning appears first in minute, itching pimples, which soon change into water blisters (vesicles). When these are broken by the almost inevitable scratching, the skin becomes raw and moist, or scabs may be formed; it is a form of Eczema, and is very troublesome unless promptly cured.

Treatment.—A writer in the *Popular Science News* states that he was always susceptible to this poison and greatly annoyed by it till he learned to check it in the following way: saturate a slice of loaf bread with water, then spread on one side of it common washing soda, and

apply to the poison patch of skin. When the bread becomes dry, moisten it again; keep on one-half hour. This is a kind of bread poultice. The remedy should be applied immediately on the appearance of the humor to do the best.

The bruised leaves of the common plantain bound on is a good remedy.

A wet cloth, upon which fine salt has been sprinkled, often cures.

Soft soap also affords great relief. Carbolized vaseline or cosmoline freely and repeatedly rubbed upon the eruption is one of the best remedies.

Sulphite of Soda dissolved in water is very highly recommended.

The following prescription is said to afford immediate relief.

℞
Carbolic Acid grs. x
Powdered Borax ʒii
Vaseline ʒi

Mix and apply on a soft cloth three or four times a day.

The oxide of zinc ointment is one of the best remedies to apply when the humor begins to heal.

Alum-curd is a popular remedy with some physicians.

CANNED MEAT POISONING.

Cases of poisoning from eating canned meat occasionally occur, but they are not common. The meat may have been tainted before it was canned, or it may have been improperly canned.

The symptoms and treatment of canned goods poisoning are the same as for meat poisoning when not taken from cans. (See page 152) The following simple rules about the use of canned goods may be useful in preventing poisoning of this kind.

1. Reject all meats that are contained in corroded cans.
2. Reject all cans that have the ends pushed out by gas contained within.
3. If there is the least taint discovered on opening the can, reject it.
4. On opening the can, remove the contents immediately and keep in a cool place.
5. Remember that fresh meat canned will "spoil" after the can is opened as soon as any meat.

PART III.

SUDDEN ATTACKS.

SPASMS, FITS AND CONVULSIONS.

If some member of the family suddenly falls into a convulsion, and if it is the first case in the household, it makes an emergency for which the average family is poorly prepared. A messenger is sent in the greatest haste for *the* doctor, but he may not be at home. To aid the inexperienced in the diagnosis and treatment of these sudden convulsive attacks, we describe the most common kinds, and point out some sensible things that may be done in the absence of a medical man.

It may be said here that convulsions are by far the most frequent in infancy and childhood. With the exception of epileptic and hysterical fits, convulsions in adults are uncommon; when they do occur, they are, as a rule, of a very bad omen, signifying something more formidable than those which occur in the early periods of life.

Convulsions in Children.—Diseases of the nervous system are extremely frequent during the early periods of life. The rapid development of the brain and spinal cord, and the great activity of the circulation

account for this in part. From birth to the seventh or eighth year there is what some physician has called “an undue mobility of the nervous system.”

Slight irritation in any part of the body is a sufficiently exciting cause for spasmodic and convulsive attacks. In the majority of cases, when they are not produced by organic disease of the brain, or epilepsy, they leave no bad results; but if they occur frequently, they are apt to weaken the intellect and impair the child's general health.

Inward Fits.—We judge that this term is more common in England than in this country; by it is meant a slight spasmodic affection of infants. The infant lies as if asleep; the eyes are imperfectly closed; the muscles of the face twitch, particularly those about the mouth, which is often drawn into the semblance of a smile; “poets have told us that it is the ‘angels’ whisper’ which makes the babe to smile—a pretty conceit of which we can scarcely forgive science for robbing us.”

These inward fits may possibly be the premonitions of a real convulsion, but generally they depend upon indigestion or wind in the stomach and bowels as a cause. A little aromatic drink—peppermint water or catnip tea will usually cure the trouble.

Nine-day Fits.—(Infantile Lock-jaw). This is the first disease in point of time which seizes the little stranger after his advent into this world. The spasm usually attacks infants less than two weeks old. The most common causes are want of cleanliness and un-

healthy surroundings. It gets its name from the fact that the attack lasts about nine days. The spasm is sometimes preceded by a little stiffness of the jaws and a difficulty in nursing. When the spasm is fully formed, the jaws are locked; the legs are drawn up and rigid; the arms are bent up; the head is thrown backward and the whole body is rigid. To the ordinary observer the attack would pass for a simple fit but it is different, and much more dangerous. The spasm may last several hours, then remit. The attack proves fatal in nearly every case.

Child Crowing is a sudden spasmodic attack—a momentary and involuntary suspension of the breathing, followed by a noisy and crowing inspiration. The attacks are at irregular intervals, and not attended with fever or cough. It is something different from the ordinary “holding the breath” which happens when the child is crying in anger. It is a real spasmodic disease and has had different names—Spasm of the Glottis, Internal Convulsions, etc. Undoubtedly many mothers have noticed in their infants the phenomena of the disease while they were ignorant of its name and real nature. The paroxysm is similar in its nature to an ordinary partial convulsion and the treatment called for is about the same.

General Convulsions.—Premonitory symptoms are noticed in some cases. The child seems unnaturally

drowsy, and the head is hot. Sudden startings or twitchings of the limbs or of the muscles of the face occur. When the fit is about to begin, the child lies quiet with the eyes open and fixed; they may be turned upward, or squinting may be noticed.

When the attack comes on, the body becomes stiff and immovable. The muscles of the face twitch, the mouth is distorted. The face is at first pale, then it becomes livid or black, as the saying is. The breathing becomes very irregular, noisy and laborious. The thumbs are turned in upon the palms, and the fingers clenched upon them. The pulse is rapid and small. At the end of one or two minutes the spasms stop to return after a few minutes or to cease altogether. It should be known that the convulsion may be epileptic. Such is a general convulsion. The partial form is perhaps fully as common. In this form spasms of the muscles of the face and of those about the eye, and it may be those of one side of the body, occur, but the body generally is not convulsed.

Causes.—Anything which over-excites the nervous system is likely to produce spasms. Diseases of the brain and of the spinal cord are well-known causes. Indigestion or irritation of the stomach or intestines by fermenting or undigested food, the presence of worms, etc., are prolific causes of convulsions in infants and children. A change of milk in bottle-fed infants is sometimes a sufficient cause. A change of the breast milk of the mother from sickness, anger, fright and other causes

has been followed by convulsions in the infant. Teething, fright and exposure to cold are exciting causes in infants predisposed to nervous diseases.

Another class of cases is made up of those convulsions which occur at the beginning of Scarlet Fever, Measles, Cholera Infantum, Pneumonia, etc., and at the close of these diseases. Convulsions are apt to take place during the course of Whooping Cough.

Treatment.—It is fortunately the case that all convulsions in children require nearly the same treatment and that the most important things can be done by any intelligent person. First the child's feet and legs should be put into a hot bath, to which mustard may be added. If not too much delay is required, it is, perhaps, better to put the child's body into a hot bath; it has a soothing effect, and somewhat relaxes the muscular spasms. Cold water must be applied to the head until it seems cool.

As, in the majority of instances, the fit results from an unhealthy condition of the stomach and bowels, an emetic should be given as soon as the child can swallow. This simple remedy will, in a great many cases, effect a speedy cure. Another measure of great importance is to secure at once free action of the bowels. An injection of warm soapy water will generally produce a prompt evacuation.

These steps in the treatment of an ordinary case of convulsions are certainly judicious, whether they are taken by a doctor himself, or in his absence. In many

instances the writer has found these measures alone sufficient to a speedy relief. While these things are being done, the family physician will probably arrive who can direct such other treatment as the particular case may require.

Generally speaking, ordinary convulsions in children are not attended with immediate danger.



EPILEPSY.

This has various other names : The Falling Sickness, Fits, Grand Mal of the French. If a person has been subject to fits coming on every few weeks, or at longer intervals for a long time, no mistake would be made generally in calling them epileptic. Epilepsy has been known and described in medical writings since the most ancient times. It was called by the Greeks the "sacred disease," because they supposed the gods had a special influence over epileptics. The ancients thought that an evil spirit had taken up his abode in the body, and they tried to frighten him out by loud noises, or to entice him out by charms and incantations.

In modern times Epilepsy is regarded as a real disease of the nervous system. It is characterized by a sudden loss of consciousness and general convulsions followed by Coma. In the majority of cases it begins between the tenth and twentieth years, and is rarely cured.

The attack is sudden and with or without warning. The patient makes a peculiar noise, or utters a piercing scream, and falls to the ground unconscious, and falls into a violent convulsion. The muscles of the face are frightfully contorted ; bloody foam collects in the mouth and on the lips ; the eyes are open and either fixed or in constant spasmodic motion ; the head is thrown backward or to one side ; the breathing is very irregular, or

laborious and noisy. After a minute or two the face becomes livid ; the limbs and other parts of the body are in spasmodic action. The fits last from five to eight minutes or may be much longer.

Gradually the patient falls into a deep stupor or sleep, from which he wakes exhausted and without knowledge of what has happened.

Real epilepsy is usually preceded by warnings, which are called epileptic *aura*. They are of various kinds : a sensation as if cold water was being poured upon the limbs ; or as if a puff of cold air was being blown upon them ; or as if insects were creeping over the body.

“ Dr. Gregory, of Edinburg, was assured by an epileptic that when a fit was approaching, he fancied that he saw a little old woman in a red cloak advance towards him, and strike him a blow on the head, on which he at once lost all recollection, and fell down.” A sharp pain may begin in one extremity and pass upward to the head. When any of these sensations stop, the fit begins. But there are many persons who do not have warnings or else do not notice them.

Besides epilepsy in its typical form there is another form which French writers call *Petit Mal*. This consists of a loss of consciousness for a brief time, attended with slight spasms of certain muscles of the face, tongue, throat, eyes or neck, but with no falling fit.

There is another convulsive attack which is liable to be mistaken for it—the hysterical fit.

The following table shows the points of distinction by the different symptoms :

EPILEPTIC FIT.	HYSTERICAL FIT.
Sudden and complete loss of consciousness.	Gradual or apparent unconsciousness.
Livid face; escape of bloody mucus from mouth; eyelids half open; eyeballs rolling.	Face flushed only, or unchanged; no froth on lips; eyelids closed and eyeballs fixed.
Patient manifests no feeling.	Patient sighs, or laughs, or sobs.
Paroxysms short.	Paroxysm of longer duration.
Paroxysm followed by stupor and dull intellect.	Paroxysm not followed by stupor, but often by crying or laughing.
No sensation of choking just before the attack. Aura.	Sensation of choking or globus hystericus—ball in the throat. No aura.

This contrast of symptoms, if carefully studied, will plainly indicate the nature of the attack, and be a guide to the treatment.

Treatment.—Nothing can be done in the way of treatment to cut short an attack. The most that a physician or a bystander can do at the time is to prevent the person from injuring himself. Persons who are old enough to understand should be taught to lie down as soon as any warning is noticed. As the attack is often sudden and without warning, the epileptic should never stand in dangerous places.

By spasmodic action of the jaws the tongue is often badly bitten; on this account it is advised to hold a stick or a roll of cloth or something of the kind between the teeth during the spasm, to prevent such injury. It is certainly true that death seems imminent during these epileptic convulsions, yet it is equally true that they are

devoid of immediate danger to life, except from accidents.

No attempt should be made by force to restrain the convulsive movements. The brain becomes congested; after the fit, cooling applications to the head should be made. Some physicians advise to compress the carotid arteries against the spinal column to mitigate or to prevent an attack. First, compress the artery on the side in which the convulsive movements are less severe.

The Bromide of Potassium or Sodium, in large doses, and continued for a long time, prevents the recurrence of the fits in some cases.



Evolution of a drinking man.

HYSTERICAL CONVULSIONS OR FITS.

No physician continues long in the practice of medicine without being called in haste to see cases of Hysterical fits. They are mostly confined to young females; they rarely attack middle-aged women, and in only the rarest cases nervous men. A little odium seems to rest upon these attacks in the minds of many persons, but there is no good reason for it. They are the uncontrollable vagaries of the nervous system. The will power seems to have become unshackled allowing the nerves to run wild. It is not in the power of the patient to calm at will these "nervous storms." They occur mostly in persons of an inherited nervous temperament, and in those who are anæmic, or weakened from any cause. The fit is in nearly every case preceded by the hysterical condition. This consists of varied sensations; a painful sense of constriction in the region of the stomach; a sensation as if a foreign body was ascending from the abdomen to the throat, known as the *globus hystericus*; or there may be unreasonable fits of laughing or crying. The paroxysm or fit comes on gradually. At first the breathing is spasmodic and jerking, or the patient appears as if she was choking. Convulsive movements are often first noticed in the eyelids or eyeballs. Constant winking is common. The limbs are thrown round in various directions, but the movements seem to be partly under control. The patient resists

restraint, and often shows more than the strength of a man. In some cases she grasps her throat, or tries to tear her hair. The face is either flushed or unnaturally pale. The pulse is not changed from normal. The patient, though apparently unconscious, knows more or less of what is going on about her. When she falls, it is in a safe place, and not into the fire or from an embankment, unlike epileptics.

Gradually the storm subsides; the spasms cease and the patient becomes quiet and seems exhausted; she may fall into a crying or laughing fit. It often happens that the patient, after these convulsions, passes a large quantity of almost colorless water.

Hysterical Coma sometimes makes a feature of the hysterical attack. It may precede or follow the real fit, or it may be the only symptom, or at least the principal one that constitutes the attack.

In a case of simple hysterical coma the patient lies as if asleep, yet cannot be awakened. The breathing, the pulse, the countenance, do not appear unnatural. Occasional sighing is likely to take place. The arms and legs may be more or less rigid. The jaws cannot be opened always. Although this is called coma, it is the counterfeit of it; the patient is cognizant in part of what is going on about her. Attacks of this kind may last several hours or days, and they are alarming to those who do not understand their nature. The attack might be mistaken for apoplexy, uræmic coma (a symptom of Bright's disease), narcotic poisoning, a

state of "rum coma," or insensibility from drink, fainting, or possibly for a dying condition; if so, the attendants would be needlessly alarmed, for hysterical seizures in their varied forms are proverbially free from danger to life.

Hysterical Delirium.—A celebrated medical writer of N. Y. City says in regard to this:

"Hysterical delirium occurs generally subsequent to, or in alternation with, the paroxysms of convulsions or coma which have been described; but it also occurs alone. It is preceded and followed by symptoms characteristic of the hysterical condition. The delirium is active, and is manifested in some cases by wild, excited talking, the mind passing rapidly from one topic to another. The mind may run on either gay or grave topics, or there may be an incongruous union of both. In some cases the mind acts under the influence of insane delusions and these sometimes involve spectral illusions."

Hysteria has the power of mimicry; other diseases may be so closely imitated as to deceive everybody. The hysterical person may appear to be suffering from peritonitis, inflammation of the bowels, spinal disease, heart disease, and so on, when she has no real disease of the kind.

A hysterical fit is "contagious;" for instance, if a girl in a hospital ward, or in an assembly in which there are other young women, should fall in a fit, several others within sight might be similarly attacked.

Such is a brief and partial account of the hysterical attack. Its forms are protean and surprising. Some-

times it is difficult to distinguish it from epilepsy. The points of distinction are given on page 169.

Treatment.—A medical writer of high authority says that the quickest way and the most effectual means of bringing the patient out of a hysterical fit, coma or delirium, is to pour cold water from a little height upon the head and face till the paroxysm is cured. The same physician advises that the attendants be assured in the patient's hearing that she will certainly come out of the fit if the cold douche be continued long enough. This treatment is simple, the medicine is usually at hand, and it probably cures more speedily than other remedies. Physicians, however, seldom resort to it, because it seems "unfeeling" to the patient and perhaps to the family. But stern words and treatment do better in such cases than sympathetic ways, which often prolong the attack. For domestic treatment it is suitable, especially for a girl who is in the habit of going into hysterics. The moral effect of it may deter her from them if she knows what the remedy will be.

Asafoetida is celebrated for its effect in preventing or breaking up the attack. It should be given in pill form as soon as symptoms first appear. The pills can be obtained of any druggist. Valerian is a popular medicine in this disease. In the less severe form it may be sufficient. Hoffman's Anodyne is one of the very best medicines for the cure of hysterical attacks. About two teaspoonfuls should be given in one-third of a cup of sweetened water every few minutes till there is marked

improvement. When the nervous system is in that excited, unstable, hysterical condition which threatens a fit at any moment, the Bromide of Potassium in twenty grain doses every hour or two is the medicine plainly indicated.

Catalepsy is closely allied to hysterical coma, but it is an extremely rare affection. A New York physician of very extensive hospital and private practice says he never saw a well marked case of it. It is of little practical importance, but is generally described in medical books. Dr. Flint thus describes it: "The patient, while in this state, remains immovable preserving the position the body happened to be at the time of the attack. . . . The trunk or limbs are retained in positions which, in health, would require strong exertion of the will, and for a longer period than would be possible in health." The condition is nearly the same as that of the Mesmeric and hypnotic states. The attack may be short, or may continue for a long time.

APOPLEXY.

In common language this is called a *Shock*, *Apoplectic Fit*, or a *Stroke of Palsy*. The word Apoplexy means to “strike away,” that is, into an insensible state. An attack of this nature is rare in the young, but it is of common occurrence in those of advanced age—sixty and upwards. In the majority of the cases, the symptoms are plain, and the nature of the disease is easily distinguished.

Two principal causes are recognized.

1. Rupture of a blood-vessel in the head, in consequence of which a clot of blood is pressed upon the brain.

2. Congestion of the brain—called congestive Apoplexy—undue pressure of blood within the cranium.

A fibroid growth is sometimes detached from the cavity of the heart, and swept along by the blood current till it reaches an artery in the brain too small for it to pass through; the artery is thus plugged, and a condition almost identical in its symptoms to that of Apoplexy results. We hear of persons having many Shocks, and still they are living. The attacks are of this kind; not true Apoplexy caused by a clot of blood.

Considering these several causes of the Apoplectic state, it may be more easily understood that the danger and gravity of the attack depend largely upon the cause. The symptoms may be misleading. The first cause—a clot of blood—is followed by the most disastrous consequences. If the patient survives the immediate danger, he will probably be more or less paralyzed, and remain an invalid as long as he lives. In a small number of the cases premonitory symptoms are noticed, such as a feeling of weight or fulness in the head, dizziness, ringing noises in the ears, flushing of the face, etc. ; but the same symptoms often occur in persons who do not subsequently have a Shock.

The seizure is not always absolutely sudden. The patient may feel strangely for a few moments, partially losing his mind and his power of speech. When the attack is fully developed, the patient lies as if in a deep sleep ; his breathing is noisy and laborious ; the lips and cheeks are puffed out at each expiration ; the pulse is distinctive ; it is full, slow, and sometimes irregular ; the pupils of the eyes are changed, either dilated or contracted, or the two vary in size ; the eyes remain half open ; the mouth is drawn to one side, and one side of the body is paralyzed. The patient cannot swallow. The limbs are flaccid ; and when raised, fall passively to the ground. In some cases slight twitchings and spasms of the limbs are noticed, or there may be a convulsion. If the patient is to recover, he does so in a short time. A characteristic thing about the attack is that the tem-

perature of the body is lowered, it being much different in this respect from sunstroke, in which attack the temperature is raised. Apoplexy is most likely to happen after a full dinner, or during sleep.

Besides these severe and generally fatal attacks, others less severe are frequent. The mind may not be wholly lost, and other symptoms may be lacking, or slight, recovery taking place wholly or in part in an hour or two. But paralysis may continue for years.

Such is an apoplectic fit. The attack must be distinguished from others which it resembles, namely: Sunstroke, Fainting (Syncope), Insensibility from Drink or Narcotic Poisoning, Epileptic Coma, and Hysterical Coma.

Sunstroke or *Heatstroke* has been described in a foregoing article, which see. It closely resembles apoplexy in its sudden attack and in the insensibility; but there are plain marks of distinction. In Sunstroke, unlike Apoplexy, the skin is hot and dry at first; the temperature is high— 104° to 110° F. (in the common variety). The pulse is not so slow and full as it is in Apoplexy. In Heat Exhaustion the skin is usually cool, but unlike Apoplexy the pulse is rapid and small, and there is no paralysis or snoring breathing. On account of the differences in the treatment needed, it is important to distinguish the two conditions.

Fainting (Syncope). Fainting results from a temporary weakening of the heart's action. Unlike Apoplexy it occurs most frequently in young women. The pulse

is very small or imperceptible at the wrist. The breathing is quiet and not attended with a puffing out of the cheeks.

Insensibility from Drink or Narcotic Poisoning. Policemen and bystanders often mistake a case of Apoplexy for one of profound intoxication. There are a few points of distinction which should prevent such mistakes. If a person is "dead drunk," the pulse is soft and rapid usually; if the eye is touched with the finger, an attempt is made to close it. There is a very strong odor of liquor, but this is not a trustworthy sign, for a person might fall in an apoplectic fit after moderate drinking. A drunken person will be affected, generally, when strong ammonia is held to his nose; a person in an Apoplectic condition will not. In insensibility from drink no paralysis is noticed. The same distinctive marks, or nearly the same, are found in poisoning from Opium, but in the latter case the pupils are contracted to "pin holes," if the stage of insensibility is reached.

Epileptic and Hysterical Coma are generally preceded by convulsions; the stupor is less profound than that of Apoplexy. The breathing and the pulse are entirely different.

Treatment of Apoplexy.—Lay the patient down with the head slightly raised. If at hand, take a piece of ice, fold it in a towel and strike it against some hard object till the ice is broken into fine pieces; then wrap the towel around it and apply to the head. If ice cannot be obtained, apply the coldest water to be found. This is

by far the best treatment for Apoplexy, whatever the cause may be; it moderates hemorrhage from a ruptured artery, and prevents or allays congestion of the brain. In the mean time heat must be applied to the feet and legs to draw the blood to the extremities and from the head. An injection of soap and water should be given to empty the bowels, and if the patient can swallow, give a quick cathartic—Castor oil, Salts or Seidlitz powders. *Do not give stimulants*; they increase the amount of blood in the brain, and may, on this account, be harmful. The patient should be kept still. From the writer's own experience, and by the authority of others, it may be said that there is danger in raising the patient *suddenly* to a sitting posture, or in laying him down quickly; it is likely to start afresh the hemorrhage. If a clot is pressing on the brain, ordinary or extraordinary medicine will not remove it. When medicine is indicated, it is generally the Bromide of Potassium or Sodium. It lessens the blood pressure in the head. It may be given in doses of 20 or 30 grains every 3 hours for awhile.

Congestion of the Brain.—This means an excessive amount of blood in the brain. It may be an acute and sudden attack. It is often produced by sun-stroke, by fits of anger or other excessive mental excitement, by alcoholic stimulation, etc. If congestion is of a sufficient degree, congestive apoplexy may result; but congestion may fall short of this and produce such symptoms as intense pain in the head, with a feeling of weight, fulness and bursting. Delirium may occur.

The face is flushed and the head hot. The carotids (the large arteries in the neck) beat violently. The pulse is generally full and strong. A moderate degree of congestion is not attended with immediate danger.

Treatment.—This condition plainly calls for cold applications to the head, because they drive blood from the brain. If at hand, ice-cold water should be used. At the same time the feet and legs should be put into a hot bath in order to draw the blood from the head to the extremities. If the congestion is not rapidly relieved by these means, an active cathartic should be given, such as a Seidlitz powder or a dose of Salts.

Fainting Fits (Syncope).—Delicate women and those of a sensitive nervous organization are subject to Fainting. The attack is sudden and lasts from a few seconds to two or three minutes. The patient has at first a sensation of sinking at the stomach and about the heart. Dizziness, dimness of vision and ringing in the ears follow, and the person generally becomes unconscious. The features look pinched and the lips and face are deadly pale. The pulse is at first small and fluttering, and at last imperceptible at the wrist. The patient may not seem to breathe. The first signs of recovery are attempts at swallowing, sighing and a return of the pulse. The attack terminates with nausea and vomiting in some cases.

The cause of this condition of seeming peril is a temporary failure in the action of the heart. In nearly all cases recovery takes place; but when fainting is caused

by great loss of blood there is much danger that it may terminate fatally. Persons whose blood is poor and watery (anæmic) are subject to Fainting fits. They may result from emotions of joy, anger or grief.

Treatment.—In mild cases the inhalation of a little ammonia, eau-de-Cologne, the spirits of camphor or sprinkling the face in cold water and fanning, will restore to sensibility. In more severe cases the patient must be placed in a reclining posture with the head lower than the body. If the patient does not breathe, ammonia will do no good. Dashing cold water in the face has a stimulating effect upon the nervous system, and through it, upon the action of the heart. In desperate cases it may be tried. Heavy flannels wrung out in hot water applied over the heart and stomach have a good effect. In all cases if the patient can swallow, or as soon as he can, the aromatic spirits of ammonia or alcoholic spirits are called for.

Dizziness (Vertigo).—The phenomena of this attack are, a swimming of the head, a feeling of disordered equilibrium, and a condition in which objects seem to whirl round the person. If the patient is standing or walking, there is often a feeling as if he might fall forward, and in some cases he does fall, but there is no loss of mind.

Chronic dyspepsia or indigestion is the most common cause. The attack is more apt to occur when the stomach is empty. It is associated with pain in the stomach after eating, heartburn, nausea and vomiting,

flatulency, etc. Occasionally vertigo is a symptom of nervous exhaustion. In some cases it depends upon disordered vision, causing what surgeons call eye-strain. We are assured that dizziness is a prominent symptom in diseases of the internal ear.

Treatment.—But little will be said here in the way of treatment. The patient should consult a physician who may detect the cause and remove it by treatment adapted to the particular case. When the attack comes on, the patient should lie down till it passes off. The attack in its nature is free from immediate danger to life.

Palpitation of the Heart.—The action of the heart may be increased to such an extent that the patient has a feeling of discomfort or of actual distress. This is called palpitation of the heart. Naturally one does not feel the action or beating of the heart. As some one said, who was perfectly well, he should not know that he had a heart. If the normal movements of the heart are much disturbed, the patient will be immediately conscious of its existence. Palpitation is very common, and is to some persons alarming, especially the first attacks.

The causes of palpitation are many and various. The direct cause is an over-excitation of the nerves which are connected with the heart. It may be caused by organic disease of the heart, but in most cases it is occasioned by increased and disordered action and not by real dis-

ease of this organ. The most obstinate and distressing cases the writer has attended were independent of organic heart disease.

Among the *predisposing* causes are a susceptible and excitable temperament; physical and mental exhaustion; the hysterical condition; excesses of various kinds; poverty of the blood—*anæmia*.

Among the *exciting* causes are violent exercise; emotional excitement, such as fright, fear, anger, etc.; the use of strong coffee; tobacco smoking; indigestible food and dyspepsia.

The sensations during an attack of palpitation are varied. There may be a slight flutter or an unnatural heavy beating for a brief time, or only momentary. Sometimes a single unnatural beat occurs and no more. Patients expressing their feelings say that the heart “turns over.” This sensation often happens during the first sleep at night and suddenly awakens the person. It may of course occur at other times.

Besides the slighter disturbances in the action of the heart, prolonged paroxysms more commonly happen. The heart may beat very strongly and seem to pound against the chest-walls; or, in some cases, it may seem to rise into the throat. The beating in some cases is very rapid. The sensation is not one of pain, but it is a very uncomfortable feeling. The trouble may continue for several hours and may often return.

Treatment.—The patient should remain very quiet during the attack. The tincture of *valerian* in one tea-

spoonful doses will in many cases control the trouble. The bromide of potassium or sodium, in twenty-five grain doses, works well in some instances. Hoffman's anodyne in doses of a teaspoonful or more is a good medicine for these attacks. It may be taken every fifteen minutes till the patient is relieved. The aromatic spirits of ammonia may be tried. Sometimes aromatic drinks, essence of peppermint or checkerberry has a good effect. If there is organic heart disease, a physician will be consulted for remedies to relieve distressing palpitation. The causes, if known, such as the use of coffee, or intemperate tobacco smoking must be avoided. The anæmic, who are particularly subject to these attacks, are often cured by taking for a while small doses of some preparation of iron.

PAINFUL ATTACKS.

HEADACHES.

Headache makes up a large part of the pain to which the human family is subject. It is an attendant upon the onset of nearly all acute diseases, and it often occurs independently. We propose to describe here the symptoms, and suggest treatment for several common forms of headache, namely :

1. Sick-headache.
2. Nervous headache.
3. Bilious headache.

1. **Sick-headache** is known to physicians by other names :—Hemicrania, Migraine, and Neuralgie Headache. The attacks are periodical ; that is, they come on with certainty at longer or shorter intervals. The attacks begin differently in different persons, but in the same person the onset is about the same each time. Commonly, the person wakes in the morning with a slight headache, which gradually increases. Certain excitement, fatigue, late hours, and late suppers may possibly hasten these paroxysms, but they are sure to come sooner or later without such exciting causes. They are considered by some physicians as a disorder of the nervous system, akin to epilepsy and hysteria—nervous storms. Many patients have warnings of an attack, such as sensations as of a band tightly drawn around

the head, nervousness, irritability of temper, chilly sensations, uneasy feelings at the stomach, and cold or clammy extremities. Another peculiar premonition is a disturbance of vision. Spots and fantastic shapes of light, and dark colors may dance before the eyes, or sharp flashes of light may shoot across the field of vision. As the headache increases, these disturbances of vision decline, and generally nausea begins, and is soon followed by vomiting. The latter symptoms are not always present. In some cases, speedy relief comes after vomiting; in more, sleep is required to bring it. The pain may be confined to one side of the head. This gives it the name of *Hemicrania* (half of the head). Vomiting is rare in this form. The pain may change to different parts of the head. It is apt to be severe, and located just above the eye. Some persons have described the pain as if "a point in the temple were being bored with a gimlet, and the gimlet slowly increasing in size." In many cases, the pain is not confined to any part of the head. Bright lights and noises increase the pain. The ache is often of a throbbing and bursting kind, which the slightest movement, mental excitement, or effort aggravates. The patient desires to be "let alone." The above symptoms do not complete the list; every sufferer could add others to it. The attacks last from six to twenty-four hours, or possibly longer. Sick-headache ceases altogether at about the age of fifty, as a rule.

Treatment.—This is the important and practical part of this matter. It is certainly true that in many instances these painful attacks may be prevented, or if not, they may be mitigated. If the patient has premonitions, treatment should begin at once. It must be remembered that the remedy which relieves one person may not relieve another. A trial of different methods and medicines should be made till the appropriate one is found. Within the last ten years several new remedies for headache have come into use. Let the patient, as soon as the first intimation is noticed, retire to a quiet and darkened room and sleep for a while if possible. If the feet and legs are cold, they should be put into a hot bath, or hot applications may be made to them. In many cases, bathing the head in some cooling lotion acts like a charm in allaying the pain. The essence of peppermint, the spirits of chloroform, Pond's extract of witch-hazel, alcohol, with a little ammonia added, may be used. Cold water is grateful to some; to a few patients hot water applied to the head for awhile is decidedly better. It may be found that total abstinence from food cuts short the threatened attack; in other cases, drinking strong coffee or tea, and eating, are followed by effects decidedly better. Let the patient try some active physic such as two Seidlitz powders, or a full dose of the effervescing Epsom salts in a cup of ginger tea.

Try the free inhalation of the spirits of camphor, or the water of ammonia cautiously.

If the attack comes on soon after eating a hearty meal, a full emetic dose of the syrup of ipecac should be taken.

Freedom from all mental excitement should be secured in all cases, if possible.

For neuralgic headaches, in which the pain is located in some particular part, the following mixture applied on flannels works remarkably well.

R. Chloroform
Tincture of Aconite
Spirits of Peppermint aa $\overline{\text{3}}$ ii

Mix ; shake well before applying ; be careful not to get in the eyes ; poison internally. Another new remedy is a solution of menthol and alcohol, eight drachms to one-half pint of alcohol ; bathe the head freely with it.

Coming to internal medicines, we will say that those named below may be tried at the beginning or during the fully developed attack, but the best effect is obtained when they are taken as soon as the pain or the premonitions are first noticed.

Guarana, or guarana combined with celery is one of the best of the remedies, not known perhaps to everybody. All druggists keep it or can obtain it. It is free from danger, and may be taken every half hour till the pain is better.

Often so much nausea is felt that the patient loathes anything in the way of medicine ; on this account the new effervescing or foaming preparations are the most

agreeable and the best. They come in the form of granules or small grains, which foam when dissolved in water. Drinks of this kind sometimes "settle the stomach" or are better borne than other medicines.

The citrate of caffeine in granules, two to four grains to the dose, and taken if need be every hour for a few doses, is an excellent remedy, and cures many cases.

The Bromo-caffeine is one of the newer remedies for sick-headache. It will cure many cases. It comes in the form of granules, and can be bought of any druggist. Dose, one to two teaspoonfuls in one-half cup of water, to be taken while foaming, and repeated every hour if required.

A still later preparation is the Phospho-caffeine compound in effervescent granules. It contains a small quantity of the new remedy, antipyrin. Dose for an adult, one to two heaping teaspoonfuls, and repeated every half hour if needed, to be taken in one-half tumbler of water and while foaming.

The simple bromide of sodium in fifteen to twenty grain doses in considerable water should be tried, if it never has been.

The new remedy, Antipyrin, is popular just now, but it is too dangerous for everybody to handle, and should not be used unless under the direction of a physician.

Phenacetine is the latest remedy. In some cases it has a wonderful effect in curing the headache. It can be obtained of druggists in pill form, three grains each. They should be cautiously taken. The following medi-

cines can be tried in the intervals of an attack. They can be obtained of any druggist. Dr. Wylie, of New York City, states that a pill or a capsule containing one grain of inspissated ox-gall and one drop of oil of gaultheria, taken every hour as soon as the pain is first felt, will almost invariably cure the sick-headache. High authorities recommend the alcoholic extract of *Canabis Indica*, made into pills, one-third grain each, to be taken three times a day for one or two months.

A celebrated Philadelphia physician prescribes the following :

R.	Ammonii Chloridi	℥ss
	Fl. Ex. Cimicifugae	℥j
	Glycerini	i ℥ii
	Syrup Tolu	
	Aquae Lauro-Cerasi	aa ℥i

Mix. Dose, teaspoonful three or four times a day in one-half glass of water.

Nervous Headache.—This is most common in women, though it often occurs in men. It resembles sick-headache in many points, but its causes are somewhat different. Mental and physical overwork, worry, the want of sleep, and nervous excitement are the frequent exciting causes. The “sight-seer’s headache” is a variety of it. A person from the country, who visits the city for a day, comes home at night with a bursting headache. It is also called the tired headache. Nervous headache is not always paroxysmal; it may be a steady, but not a severe pain, continuing one, two, or

several days. Women and children are subject to it. It differs from sick-headache in being avoidable and not periodical. Disturbances of vision may precede the pain, as in sick-headache. Vomiting does not generally accompany the attack. The cause of nervous headache is usually obvious. These are the principal points of distinction.

Treatment.—If sick-headache is mistaken for nervous headache, no great harm will be done in the way of treatment, for many of the remedies which are beneficial for the one are indicated for the other. Cooling lotions, such as were named above, are especially indicated in nervous headache. The effervescing granular preparations containing the bromides are the best of the class of internal remedies, and will generally afford marked relief. The bromide of sodium should be tried. The aromatic spirits of ammonia is useful in some cases, in one-half teaspoonful doses. It is probably true that the use of coffee is the cause of headache with some people—not with every person. Let the person who suffers often with headache leave off drinking coffee for a few months and mark the effect; it will be surprising sometimes.

Bilious Headache is the dyspeptic headache. It is sympathetic with some derangement of the stomach. The word bilious is an old term which sticks to common medical language, but it has lost its original meaning, for the bile has nothing particular to do with this head-

ache. It is the kind of headache which is the sequel of over-eating, or the eating of food which disagrees with the stomach, or the intemperate use of stimulating drinks. It is the headache of debauches, banquets, and late suppers. The ache may be of great severity, and of a bursting or snapping kind. Nausea and vomiting sometimes occur, making it appear like sick-headache, but the latter symptoms result simply from acute indigestion.

Dyspeptics sometimes suffer from a steady, dull headache, for days or weeks ; this is usually called a bilious headache.

Treatment.—In these headaches, dependent upon derangements of the stomach, vomiting often takes place spontaneously ; if not, and if there is nausea from undigested food in the stomach, great relief is sometimes obtained by the use of some simple emetic, such as large drinks of warm water, or warm water with a little mustard added. If the syrup of ipecac is at hand, two tablespoonfuls may be taken, followed by copious drinks of warm water.

If there is no reason to believe that undigested food is in the stomach, a mild laxative may be given at once, such as Tarrant's Seltzer aperient, Seidlitz powders, or the effervescent Epsom salts. Cooling applications to the head are grateful.

Toothache.—An attack of severe toothache makes an emergency when the sufferer is far from a dentist or

far from having courage to call upon one. The ache is a tormenting pain, and whoever has felt it can appreciate Robert Burns's "views" upon the subject. See page 21 in this book.

The celebrated Dr. Gross, of Philadelphia, said that "no domestic remedy for toothache is deserving of any attention." He was certainly mistaken on this point. The writer of this article, when a boy living in the country at a distance from a dentist, often suffered from severe toothache, caused by exposure to cold and dampness, until, by means of a simple domestic remedy, applied by the ever gentle and loving hands of his mother, he was transported from the agonies of that place where pain is supposed (by some) to dwell forever to the peace of Heaven. After personal experiences of this kind the writer discounts anybody's dictum which reduces to nothing remedies that are precious to the sufferer when nothing better can be obtained.

When a tooth is ulcerating, domestic remedies will not stop the pain. The patient should, as soon as possible, visit a dentist, who will either extract the tooth, or perform some surgical operation to cure it. But there are other and common causes of toothache, namely: the exposure of a nerve in a tooth cavity; an inflammation of the membranes around the tooth; neuralgia, etc.

Treatment.—It is sometimes difficult for the patient to decide which tooth in particular aches. Take a small

pocket knife and strike each tooth which seems to ache. The tooth from which the pain originates will be the most sensitive and cause the most pain when struck.

If a cavity can be found it should be cleared; then take a little ball of cotton, saturate it with either the oil of cloves, creasote, or carbolic acid, and pack it into the cavity. Sometimes it does as well to wet the cotton in a strong and fiery mixture, such as Perry Davis' pain killer, tincture of capsicum (Cayenne pepper) or chloroform.

A wad of cotton as large as the little finger, wet in the spirits of camphor and placed between the gum and the cheek, will ease the pain sometimes. It may make a kind of blister, but this is not so bad as the toothache.

This remedy sometimes cures: dissolve in one-half cup of water two or three teaspoonfuls of common cooking soda (bicarbonate), hold in the mouth a part of the solution for awhile, or until the pain is cured.

If the pain has been caused by exposure to cold, steaming the face should, by all means, be tried. It may be done in this way: heat a brick in the fire, then drop it into a pail of water, remove it when the sizzling has stopped and wrap it up in flannels; let the patient lie down with the side of the face which aches near the brick. The face will be constantly bathed in hot steam; another brick should be heating and a sufficient number applied to keep up the steaming operation till the pain is relieved; it may take an hour or more. A large hot poultice, or hot steaming flannels applied to the face,

have about the same good effect, as the curative agent is moist heat. In some cases dry heat somewhat relieves the pain. In connection with the above remedies it is best to put the patient to bed, cover him warmly and give hot herb drinks, or the tincture of aconite, to produce perspiration.

A Dover's powder, in doses proportionate to the age, is one of the wonderful remedies in connection with the steaming. It produces perspiration and relieves pain. It should be given with great caution to children. The remedy is good whether the toothache is dependent upon exposure to cold or upon other causes.

The ache is sometimes relieved by holding raw whiskey or brandy in the mouth. Hot water has the same good effect in some cases.

A wisdom tooth may press so hard upon other teeth that it causes constant pain. Extraction is the only cure.

It sometimes happens that neuralgic pain attacks the jaw and the teeth. Extraction of a tooth does not cure the pain. The steaming operation above described combined with the use of Dover's powders may be tried; in some cases it brings great relief.

Earache most frequently occurs in children of a delicate constitution. The pain is often very severe and hard to bear, and calls for prompt treatment. The common causes are exposure to cold and wet; inflammation of the internal or of the external passages of the

ear—often resulting in an abscess or “gathering ;” or simply neuralgia. The pain from a diseased tooth is sometimes felt in the ear. Earache is more likely to come on in the evening and is increased when the little sufferer lies down in bed. It will be difficult for any person except a doctor to make out the precise cause of the earache in the first attack ; therefore must be treated on general principles.

Treatment.—Before beginning treatment the teeth should be examined carefully. If one is found that is very sensitive and decayed it should be removed or treated as described above. A surgeon in the City Hospital, Boston, has recently advised the following treatment for earache : let the patient lie with the sick ear uppermost ; from a teaspoon pour into the ear and fill it with hot water, as hot as can be easily borne ; have ready and immediately apply to the ear and to the parts around it a large hot poultice, preferably of flaxseed meal, or if not at hand any good poultice will do well ; a hop bag dipped in hot water may be used. As soon as the dressings have lost much of their heat they must be renewed. The head may be turned over to allow the water to run out from the ear. After the dressings are taken off, the ear must be plugged with dry cotton, and covered with dry flannel.

Warm vaseline, cosmoline or sweet oil turned into the ear till it is filled, sometimes relieves the pain. A few **drops of laudanum or of cocaine** added to these is an

improvement of the remedy. Glycerine should never be used in an inflamed ear.

Another remedy, which is in most cases the best of all, is a steam bath constantly applied to the ear and over the side of the face. This can be applied by means of the heated brick in the same way as recommended above for toothache. It acts on nearly the same principle as the hot water and the poultice treatment above described.

Some doctors say that filling the ear with warm laudanum will stop the pain. Besides the above remedies constitutional treatment may be of advantage. Put the child into a hot bath, at least his feet and legs; give hot herb drinks, or small doses of aconite every hour, to produce perspiration, which tends to relieve the pain. If the pain is very severe a Dover's powder (twelve grains) or thirty drops of laudanum may be given to a strong middle aged person.

A warm flannel with a little chloroform dropped upon it, held to the ear, will, in some cases, relieve the pain for awhile. Tobacco smoke blown into the ear is a favorite remedy with some families, and doctors, too.

In inflammation of the ear there is often a tendency to the formation of an abscess, or as it is sometimes called a "gathering or rising." The pain cannot be entirely stopped till the abscess breaks. The use of poultices and hot water hastens the process and allays the pain to some extent.

Face-ache, sometimes called facial neuralgia or ague in the face, is a neuralgia of the branches of a nerve which supplies the face. The pain not uncommonly is of a very severe and twinging kind. It shoots in various directions, sometimes into the jaws, into and about the eyes, the brow, etc. The ache is apt to be intermittent, that is, not evenly continuous. The old name was *tic douloureux*. Draughts of air upon the face, chewing, laughing or other movements increase the pain.

Treatment.—Moist or dry heat has an excellent effect in soothing the irritated nerves. A large steaming poultice with a little laudanum poured upon it may be tried, or the face may be laid upon a rubber bag filled with hot water.

Pain in the neck.—Muscular rheumatism is the most common cause. A “stiff neck” is an example of it in its severe form. The characteristic thing about it is, that when the neck is at rest very little pain is felt; but when the head is moved, there is a severe catch of pain. Exposure to cold and dampness is the frequent cause. There may be attacks of rheumatism of some sets of muscles of the neck and shoulders causing more or less pain. Neuralgia about the neck sometimes occurs, but it is not very common.

Treatment.—The application of flannels wrung out of hot mustard water is good treatment for these attacks, if begun early. Flannels saturated in the ammoniated

liniment are sometimes effective. The affected muscles should be kept as still as possible for a few days.

A mustard plaster kept on till the skin is well reddened is often followed by the best results. If the pain or discomfort is not great, the affected part may be painted twice a day with the tincture of iodine.

PAIN IN THE CHEST.

In most cases, pain in this region is in the chest walls—in the outer shell; but pain also arises from diseases of the lungs and heart. The most common painful affections of the chest walls are: Pleurisy, Intercostal Neuralgia, Muscular Rheumatism, Spinal Irritation and The Shingles.

Pain arising from diseases of organs in the cavity of the chest most commonly is either from Pneumonia, disorders of the heart, or from *Angina Pectoris*. These attacks will be described below in their order.

Acute Pleurisy is often sudden and without premonitions. Exceptionally a little soreness and pain is felt in the side for a few days before severe pain begins. The pain is only a symptom of the real disease. The trouble arises on account of inflammation of the pleura, which is a membrane lining the lungs and reflected upon the inner side of the chest wall forming a closed sack. Exposure to cold and dampness is commonly supposed to be the cause of Pleurisy but it may be produced by injuries of the side, such as blows, falls, fracture of ribs, etc. In its less severe form it is common in consumptives, when it is owing to disease of the lungs. The stitch-like pain in the side which nearly always accompanies pneumonia is Pleurisy.

Pleurisy is liable to be mistaken for intercostal neuralgia, muscular rheumatism of the side and pneumonia. The points of distinction will be hereafter given. The symptoms of the first stage of Pleurisy will be described.

The pain begins as a sharp cutting pain in the side, especially felt when a deep breath is taken, and when the patient coughs. A patient whom the writer attended in a sharp attack of Pleurisy declared that he felt that "he must cough, and that if he did the pain would kill him." The patient bends his body over to one side and fixes the chest in a restrained position and makes his breathing as short and rapid as possible to prevent the pain.

A chill is often one of the initial symptoms, but chilly sensations may take the place of a chill. The patient is more or less feverish; the symptoms are like those of other fevers of a mild type. (See page 18—Symptoms and Signs of a Fever.)

Generally, but not always, Pleurisy is attended with a slight cough. The cough is suppressed on account of the pain it causes. Attacks of Pleurisy differ widely in their severity. In slight attacks the patient may walk round out of doors, in other cases he is obliged to take his bed.

Treatment.—In the first stage of this disease the object in treatment is to allay the pain and arrest, as far as possible, the inflammation. A mustard poultice applied to the painful side works wonderfully well in many cases. The skin should not be blistered. After

the mustard, hot poultices made of flax seed meal are called for. They assist in allaying the pain and inflammation. Tincture of aconite in doses of three drops every three hours is beneficial, for it promotes gentle perspiration. If the patient is strong and middle aged, ten grains of Dover's powder may be given at the beginning of the attack. A roller bandage wound tightly round the chest affords comfort, because it prevents, to some degree, painful motion of the ribs in breathing. In severe cases a physician should be called at once.

Intercostal Neuralgia.—This is a pain in the side very much resembling pleurisy and is often and easily mistaken for it. It results from an affection of the nerves which pass along between the ribs. (The word intercostal means between the ribs.) It is like neuralgia in other parts of the body, and most commonly occurs in anæmic women, in consumptives, and in those who are subject to neuralgia in other parts of the body. Unlike pleurisy the attack is not attended with fever symptoms. This form of neuralgia is most frequent in the left side and between the sixth and ninth ribs. The pain may be sharp and cutting or it may be burning. When the patient coughs, the catch is not usually as severe as it is in pleurisy. The pain is paroxysmal.

Treatment.—Fortunately, if the case is treated for pleurisy, no particular harm will be done. A mustard plaster sometimes relieves the pain. Flannels wrung

out of hot mustard water allay the pain. Ammoniated liniment or chloroform liniments have a good effect. Dry heat applied in any convenient way may be tried. A solution of menthol in alcohol (eight drachms to eight ounces of alcohol) is remarkably well adapted to relieve neuralgic pain in this situation. The solution should be applied on cotton-wool and covered with oiled silk. For further treatment, the reader is referred to the treatment of neuralgia in another article.

Muscular Rheumatism is very common in the muscles of the chest walls and is liable to be mistaken for pleurisy or intercostal neuralgia above described. Soreness, lameness, tenderness on pressure, and pain when the affected muscles are used, characterize this disease. When the muscles are perfectly relaxed not much pain is felt; but a person must breathe and move the chest at times; this occasions more or less pain. A single muscle or a set of chest muscles may be affected. The short muscles between the ribs may be attacked; then there is pain when the ribs are moved in the act of breathing. The pain is not usually so severe as it is in pleurisy. Unlike pleurisy, no fever attends muscular rheumatism.

Treatment.—To cure this pain and lameness, doctors usually rely upon some counter-irritant, such as a mustard plaster or the tincture of iodine painted upon the skin over the affected muscles. Strong ammoniated liniments freely rubbed on have a good effect. The ex-

ternal remedies which have been recommended for intercostal neuralgia do good in muscular rheumatism. Persons who are subject to this kind of rheumatism from exposure to cold should wear warm flannels and over them a chamois skin jacket.

The Shingles.—(Herpes Zoster). This is a kind of neuralgia affecting one side of the body, attended with an eruption following the course of the painful nerve in the side, from the middle line behind to the middle line in front. The eruption at first consists of groups of water blisters (vesicles) arranged on patches of scarlet red and inflamed skin. In older persons the affection is very painful; on this account it is described here; it is usually classed among skin diseases. The pain sometimes precedes the eruption; then it is mistaken for simple neuralgia, but when the humor appears the case is unmistakable. The cause of the trouble is an inflamed sensory nerve. There are many persons who never saw or heard of the Shingles, but others have, and have heard that if the eruption girdles the body it will be fatal; this is a mistake. The eruption hardly ever does encircle the body. The nerve affected starts from the spine and only goes half way round the body and there stops. The disease must and does stop with the nerve.

Treatment.—Apply to the side carbolized cosmoline or plain cosmoline and cover it with oiled silk. This is a soothing dressing and prevents the inflamed skin from

being irritated by the clothing. If these are not at hand apply any soothing ointment; mutton-tallow is better than nothing. Ointments containing cocaine is the new remedy for Shingles, and the relief from its use, in some cases, is magical.

Spinal Irritation.—As a rule, the most serious and the incurable diseases of the spine are not attended with pain, but there is a peculiar disorder of spinal nerves, which is known by the above name, and in which pain and tenderness are the principal symptoms. Attacks are most common in women from fifteen to twenty-five years of age, though men are not exempt. Out of two hundred and four recorded cases there were only forty-two men patients. The cause of the trouble is an unnatural excitability of the sensitive spinal nerves. The most frequent situation of the pain is in that part of the back between or just below the shoulder blades. In rare cases it is located in the neck and sometimes about the loins. The pain is first felt after some unusual exertion, either physical or mental; it gradually increases till it becomes a sharp, burning, shooting or cutting pain hard to bear. Pressure upon the back, especially upon certain points of the back bone, greatly increases the pain. The patient complains that she cannot rest her back against the back of a chair without suffering pain. Movements of the chest generally aggravate the pain. The patient soon observes that there is unusual weariness and exhaustion on exertion, and finds that she

cannot walk without intolerable pain. The temper is apt to become irritable, and a long train of other symptoms accompanies this illness. The skin is often very sensitive when the affected part is touched. There may be creeping sensations upon it or a sensation of heat or burning. Dyspepsia, nausea and vomiting, sleeplessness, dizziness, coldness of the hands and feet are common.

Nervous and hysterical women are predisposed to these attacks. Nearly anything which lowers the physical or nervous tone may be the exciting cause.

The course of the disease is extremely fluctuating and uncertain. Recovery may take place in a short time or the disorder may prove obstinate and chronic.

Treatment.—For temporary relief to the pain the remedies which allay neuralgic pain are generally indicated. See the treatment of neuralgia. Dry or moist heat is often very useful. Painting the spine with the tincture of iodine is highly recommended. For a permanent cure, rest, a change in habits and surroundings, nerve-tonics, such as the syrup of the hypophosphites containing quinine, iron and nux vomica are very useful.

Pain about the Heart.—Not infrequently a dull pain, or a disagreeable sensation, not really amounting to pain, is felt in the region of the heart in persons suffering from dyspepsia, anæmia, nervous prostration or exhaustion.

Rather a sharp pain just under the left breast, ac-

accompanied by palpitation of the heart, is often complained of by hysterical women. These symptoms are generally independent of any real heart disease.

Persons who have had severe attacks of rheumatic fever are subject to pain about the heart, and it is sometimes complained of during the progress of the fever. As a rule, pain about the heart is not a prominent or frequent symptom in real heart disease, with one remarkable exception, *angina pectoris*.

Angina Pectoris is a sudden attack of intense anguish about the heart; it has been called a heart pang. Just what the precise cause is, has not been determined beyond a doubt. It is supposed by some to be a neuralgia of the heart. During the paroxysm of pain the patient feels as if some invisible hand was violently grasping the heart or as if it was being torn in pieces. But the pain is not confined to the heart; it shoots in various directions, to the back, to the neck, and nearly always down the left arm. The face is pale; the heart palpitates during the fit; the breathing may be very irregular. But worse than the pain is the sensation of impending death—and death does often occur during these attacks, the heart suddenly stops beating. After the first attack, others may be brought on by overexertion, fatigue, exposure to cold, or by mental excitement. Dr. John Hunter, of London, the most celebrated name among modern surgeons, said: “My life is in the hands of any rascal who chooses to annoy and

tease me.” And, in fact, after suffering for years from *angina pectoris*, he died during an attack, brought on by a fit of anger.

Pneumonia is not particularly a painful disease, unless the pleurisy, which generally in adults attends it, makes the attack painful. For a description of pleurisy pain see page 201. A slight attack of pneumonia might be easily mistaken for pleurisy, but generally speaking, the onset of pneumonia is much more severe than that of the latter; it is characterized by a chill, a high fever, a full and bounding pulse, headache, great weakness, usually a stitch-like pain in the side, rapid breathing, considerable pressure for breath, a cough, and often the raising of rusty looking matter.

PAIN IN THE STOMACH.

Pain in this region is very common and is of every conceivable degree. A sense of distress or discomfort and a feeling of pressure or fulness hardly amounting to pain are too well known to need description; they usually result from dyspepsia. There are, however, other very painful and most distressing attacks, in which the pain seems to be located in the stomach, that the average person would not, perhaps, be able to recognize; we therefore describe them for the purpose of diagnosis.

Gastritis, which means an inflammation of the stomach, is a very painful attack. It often goes by the name of *gastric fever*, but it is not really a fever, though there is more or less fever heat. The following are in brief the conspicuous symptoms: pain of a burning character in the stomach, shooting thence into the chest and increased by taking food; a painful sense of constriction; the act of inspiration increases the pain so that the breathing is sometimes shallow and rapid; the stomach is tender on pressure; nausea and vomiting are urgent and distressing; the stomach will not tolerate water or the blandest drink; great thirst is always present, the patient wanting nothing so much as cold water; the bowels are constipated; the patient is somewhat feverish; great and remarkable weakness is complained of, and the mind is depressed. A train of

symptoms like this unmistakably point to Gastritis. Irritant poisoning produces about the same symptoms, and is the only thing that closely resembles it. Until a physician arrives, a mustard draught may be applied to the pit of the stomach, and the patient allowed to swallow a moderate quantity of pounded ice.

Gastralgia or neuralgia of the stomach is not uncommon; it is a violent paroxysm of pain, sometimes linked to a chronic organic disease of the stomach; in other instances it seizes one whose stomach has been in good condition; in other cases it seizes one who has been subject to neuralgia in different parts of the body; the pain may be excited by some article of food which disagrees with the stomach. If there is a predisposition to it, exposure to cold and damp, cold drinks or violent emotions may bring on an attack.

The pain varies greatly in intensity in different cases. It is described sometimes as a cramp-like pain, again as a burning or cutting pain, again as a feeling as if "claws were clutching the pit of the stomach."

Pyrosis is another name for water brash or heart-burn; it may amount to a severe burning pain in the stomach, shooting thence into the chest or up the œsophagus into the throat; a quantity of watery fluid is regurgitated, after which the person feels better. These attacks are most common in dyspeptics. Powdered chalk, lime-water, soda and the subnitrate of bismuth give prompt relief.

PAIN IN THE BOWELS.

Intestinal Colic.—By this term is meant a spasmodic and more or less severe griping pain in the bowels, supposed to arise from spasmodic twistings or constrictions of the intestines. The patient bends forward, presses on the abdomen and tries various positions to get relief. The pain seems to center around the navel. Simple colic is rare after middle age, but it very frequently attacks the young. It is classed among the functional diseases because no real organic change takes place; it is simply disordered action. The most common exciting causes of colic are indigestible food, or food which disagrees with the person, acid or cold drinks, eating ice-cream, chilling the skin, stoppage, severe constipation, and intestinal worms.

Wind Colic or flatulent colic is produced by a distention of the intestines with gas, the result of the decomposition of the food in the intestines—intestinal indigestion. The abdomen seems bloated and drum-like. This kind of colic is not usually so severe as other kinds; it is very common in infants.

Bilious Colic is generally preceded by derangement of the stomach, loss of appetite, nausea, a bitter taste in the mouth, etc. Besides the colic-pain the patient usually vomits, at first the contents of the stomach, afterwards bile. The bowels may be obstinately constipated, but in other cases there may be bilious diarrhœa. Nearly every one is familiar with slight attacks of bilious colic

from eating something which disagrees with the stomach; in many such cases the pain stops after one or two operations of the bowels.

The severest kind of colic is dry colic—not attended with diarrhœa or vomiting. The pain is intense, with only short intervals of comparative ease. Pressure upon the abdomen somewhat relieves the pain. The skin may be cold and clammy, and often the patient has chilly sensations. In simple spasmodic colic there is no fever; this is unlike inflammatory diseases of the bowels attended with pain.

Lead colic or painter's colic, sometimes called dry belly-ache, is caused by lead poisoning. The bowels are obstinately constipated and the abdomen is drawn in towards the back bone. The intestines are drawn up in knots and the pain is very severe.

Treatment.—The ordinary slight attacks of colic in children are generally cured by simple domestic remedies. A little peppermint, anise, or a few drops of paregoric may control the pain. Flannels dipped in hot water and applied to the bowels are always useful. Sometimes in infants and in children an injection of warm soapy water into the lower bowel relieves the pain as by magic. To an adult a tablespoonful of paregoric may be given every one-half hour. If it can be obtained, the spirits of chloroform in one-half teaspoonful doses every twenty minutes is an excellent remedy.

If the colic is very severe, laudanum, fifteen or twenty drops to a dose, is called for to relieve the intol-

erable pain. It may be given every half hour till the pain begins to yield, then it should be stopped. In bilious colic, particularly if the bowels are constipated, an injection of warm water should certainly be tried at once. If this does not bring relief, one or two Seidlitz powders or other laxative should be taken, to produce a free movement of the bowels. A celebrated Eclectic physician thus describes his treatment of colic: "Some time ago, during a visit to a patient in the country, I was taken with the *flatulent colic*, caused by error in diet: I took half a teaspoonful of *capsicum* (*African cayenne*), put it into a tea-cup, added a teaspoonful of sugar, and then poured it nearly full of hot water. After standing till it was a little cool, I sipped it all, and in one hour my pain was gone."

Cholera Morbus is mostly a hot weather disease. Some exciting cause is, however, required to bring on an attack, such as eating uncooked vegetables, unripe or decaying fruit; or taking ice-cold drinks; or checked perspiration may be the cause. The seizure is generally rather sudden, and often occurs in the night; it is preceded by a feeling of weight and uneasiness at the pit of the stomach, and often by rumbling in the bowels and slight colicky pains; these symptoms are soon followed by vomiting and purging, colic, great thirst, and often by severe and painful cramps in the legs and in the abdominal muscles, which are drawn up in knots. The vomiting is very urgent; at first the contents of the

stomach are ejected, after which bile is thrown up. A faint feeling is often complained of.

Such are the distinguishing signs of a case of Cholera Morbus, and if they are conspicuous the case will be unmistakable. The disease is a painful one, but it ends in recovery in a few hours as a rule ; it may, however, prove fatal in weak subjects. Cases of poisoning from tainted meat or fish very much resemble it, and other cases of irritant poisoning may be mistaken for it. The description of poisoning from irritants may be found on page 145. In simple colic, vomiting and purging are not conspicuous symptoms.

Some doctors regard cholera morbus as of the nature of Asiatic cholera, not of the epidemic kind. Cholera infantum is the cholera morbus of infants.

Treatment.—Domestic remedies are hardly sufficient to control the pain and vomiting. A physician should be called. If one cannot be obtained, or “till the doctor comes,” the treatment may be as follows: immediately after vomiting, drink freely of water as hot as can be borne. If the essence of peppermint or Jamaica ginger is at hand, add a little to the hot water. The medicines recommended on page 213 for colic may be given in cholera morbus. Whatever is given, it should be given immediately after vomiting, and if it is vomited at once, small doses should be often repeated. The hot applications to the abdomen must not be forgotten in this form of colic pain. A mustard poultice applied to the pit of the stomach is useful in many cases, because it allays

the irritation of the stomach. Pounded ice, in sufficient quantities, will sometimes control the vomiting.

Stoppage of the bowels may occur suddenly; if so, urgent symptoms at once appear—severe pain and vomiting; but more commonly stoppage is gradual, and results from a gradual over accumulation in the large intestine—the colon—of hardened fecal matter, and chiefly in oldish persons and in those whose habits are inactive or sedentary. The patient may notice (sometimes he does not) that his bowels are more costive than usual; he takes some cathartic, but it does not have the desired effect; something more active is tried; but the bowels remain obstinately costive. In the mean time colicky pains are felt, but are not severe. The abdomen becomes somewhat distended, but it is not usually very sensitive to pressure at first. After a while vomiting may begin. A physician is called in and finds that there is an over accumulation of fecal matter in the intestine. Sometimes but little pain is noticed, and it is not of that severe griping character that is felt in simple colic. But stoppage may arise from other causes, such as compression of the intestine by tumors; twisting or displacement; stricture of the canal from morbid growths; in children from the folding of the intestine into itself. Stoppage of the bowels is most likely to take place in that part of the colon called the *cæcum*, which is situated just above the groin in the right side of the belly. Fecal matter is apt to collect here, giving

rise to more or less pain and tenderness, and after awhile to a fulness or to a tumor, which can be easily felt. The passage through the intestine is not always completely closed, but if the case is neglected, fatal results may follow. Another part where clogging is apt to take place is in the colon on the left side and lower part of the abdomen. The lower bowel, the rectum, infrequently becomes clogged with hardened fecal matter.

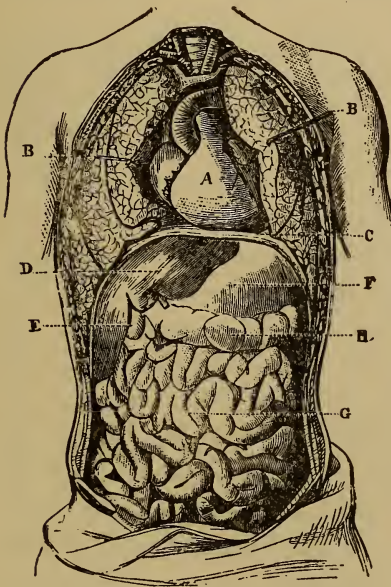


FIG. 26.—SECTION OF CHEST AND ABDOMEN.

- | | |
|---------------|---------------------|
| A, Heart. | E, Gall Bladder. |
| B, The Lungs. | F, Stomach. |
| C, Diaphragm. | G, Small Intestine. |
| D, The Liver. | H, Large Intestine. |

In the accompanying figure, the large intestine—the colon—is seen in the upper part of the abdomen. The *Cæcum*, which is the head of the colon, is low down on the right side and covered in the figure by the small intestine. The S-shaped and lower part of the colon, where stoppage is apt to take place, is low down on the left side and covered by the small

intestine. One important thing should be remembered: powerful physic must not be given in the later stages of

a case appearing like stoppage. Injections of warm, soapy water to which glycerine is added are always safe, sometimes effective, and should be persistently tried. Besides this, the latest practice in treatment is to give repeated doses of some saline cathartic, such as Seltzer aperient, Carlsbad salts, Hunyadi water, or Seidlitz powders, which produce a watery condition of the intestinal tube, liquify its contents, and tend to move the bowels.

Stoppage sometimes occurs as the result of inflammation of the *cæcum*. In this event pain and tenderness begin in the right side of the bowels just above the groin, and after awhile a tumor can be felt in this region.

An inflammation in that apparently useless and out-of-the-way corner of the alimentary canal, called the appendix of the *cæcum*, gives rise to symptoms closely resembling those of inflammation about the *cæcum*. There is a small opening into the appendix through which such foreign bodies as cherry stones, the seeds of other fruits, hard baked beans or a little hardened fecal matter sometimes passes and becomes impacted, as there is no outlet of this sac. The foreign body may ulcerate through the coats of the appendix, or an abscess may form and break into the abdominal cavity, giving rise to fatal peritonitis. When a trouble of this kind is detected in its early stage, modern surgery with swift and skillful hand comes to the patient's rescue; an opening down upon the tumor is made, the diseased appendix is removed and the patient lives.

It is quite difficult to distinguish between inflammation of the cæcum and that of the appendix. In the way of treatment the best thing that can be said here is that all affections in this region should be looked upon with suspicion, and skillful assistance should be promptly called.

Inflammation of the Bowels. As used by common people this term may mean an inflammation of the mucous membrane of the small or of the large intestine, a disease not uncommon in infancy and early childhood, but rare in adults.

Such attacks are attended with pain, diarrhœa, vomiting and more or less fever. They are too perilous to be left to the management of unskillful hands.

Peritonitis is often called inflammation of the bowels, but is an inflammation of the strong membranous sac which invests and contains the bowels. Acute peritonitis rarely, if ever, comes on as an idiopathic disease. In the majority of cases, it begins as a circumscribed or local inflammation which has extended from some inflamed organ or part, such as an inflammation about the cæcum or its appendix, stoppage of the bowels or strangulated hernia resulting in inflammation, etc. In women it occurs as a result of inflammation of the pelvic organs, and often as the sequel of a criminal operation to produce premature birth. The signs of beginning local peritonitis are pain, great tenderness, fever and chilly sensations, and often vomiting and obstinate constipation.

The disease may possibly remain local and end in recovery, but it often ends in general peritonitis, which is attended with very great danger to life. In inflammation of abdominal organs or parts, nothing is better for first and common treatment, than the application of large flaxseed or slippery elm poultices. They serve to allay inflammation. The latest theory in the treatment of peritonitis is to give some saline cathartic to produce free watery stools.

Strangulated Hernia. A hernia is, in common language, a rupture or breach. It is formed by a coil of intestine, or a part of its covering, which presses out through some breach in the abdominal walls. There are several kinds; the most common is the inguinal, which appears in the groin. The umbilical is common in infants; it is situated at the navel and is pressed out when the child coughs or cries.

The proper thing to do, as soon as it is known that a hernia exists, is to put on and wear a good fitting truss; it often entirely cures the trouble in the young. When a truss is not worn, and sometimes when it is, a very painful and dangerous accident is liable to happen. From various causes, such as violent exertion, the hernia may be pushed down and become strangulated or constricted, so that it cannot be easily returned.

If a constriction takes place, sufficient to cut off the circulation of the blood and the passage of the natural contents of the intestines, the patient's life is at once put



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in jeopardy. The tumor becomes tense, painful and tender to the touch, and there is a sense of tightness across the belly; the pain increases and seems like colic pain. If this condition of things continues long, vomiting sets in.

Treatment.—What should be done? Send for a surgeon at once. In the mean time, the patient should lie down on his back, with his legs raised, and make gentle efforts with his hands to press or coax the tumor back into place. It is advisable for the patient, during this operation, to take in a deep breath and hold it in as long as possible.

If a few trials of this kind are not successful, pounded ice should be applied to the rupture for awhile, and then another effort made in the same way to put the hernia back. If ice is not at hand, the next best thing is to apply heavy flannels wrung out of hot water for awhile. These things can be done by any intelligent person and in fortunate cases they may be successful. If the patient is a child, inverting the body may assist in effecting the replacement of a hernia.

A little hernia at the navel, which is common in infants, is easily cured by putting on a bandage with a silver half dollar sewed up in it, so that it will constantly press upon the hernia, and keep it in until cured.

It is very important, as soon as it is known a hernia exists, that a truss be put on and worn; if the trouble is not cured entirely, it prevents the hernia from getting large and painful.

Gall-Stone or Hepatic Colic. The gall-bladder is a kind of reservoir for the bile which is secreted from the liver. The bile passes out from this sac through a duct about three inches long, as large as a goose-quill, and which opens into the upper intestine. Now it happens that stones (concretions) form in the gall-bladder from sediments of the bile; these stones may remain in the gall-bladder an indefinite time without giving rise to trouble, or they may occasion more or less dull pain, but in general their existence is not suspected till a stone of considerable size starts on its passage through the gall-duct, then pain, more or less intense and sudden in its onset, is felt in the region of the liver, and, perhaps, runs into the back, up to the right shoulder, or seemingly into the stomach and bowels, or in various directions. The pain varies in intensity according to the size and roughness of the passing stone; in some cases it is very severe. There may be great tenderness over the liver, and the muscles here tensely drawn. If the pain is very intense the patient may go into a condition bordering on collapse.

Vomiting is a prominent symptom, almost constantly present; chilly sensations are often complained of; not much fever is present; the pulse in some cases is very slow; jaundice is very often noticed after a few days, and is owing to the swelling and partial occlusion of the bile-ducts.

Frequently the pain begins suddenly and in a short time stops as suddenly; in such cases the stone passes

through the bile-duct, drops into the intestine, and the trouble is over.

The author while visiting a patient who had been sick of some slight disorder, was surprised to see him suddenly seized with intense pain in the right side; for about three minutes he suffered intense agony; the pain then suddenly stopped and did not return. This was undoubtedly a case of gall-stone. About one year before the man had an attack of gall-stone colic, which gave him great pain for several hours.

Only a few days ago the writer saw a case in which the pain began suddenly, and continued with more or less intensity for 36 hours; it was attended with distressing nausea and vomiting. For two weeks thereafter the patient remained sick and weak, the skin was jaundiced, the urine was dark and like saffron-tea in color; an uncomfortable feeling remained in the right side over the gall-bladder, with great tenderness on pressure; this was undoubtedly a case of gall-stones, the passage of one or more concretions injured and inflamed the gall-ducts. Such is the difference in cases. Though such attacks are very painful, they are not generally dangerous to life. Such cases are apt to be mistaken for simple colic, or for "a fit of gravel," and for gastralgia (pain in the stomach). When the pain begins suddenly and ends suddenly, the case cannot easily be mistaken for anything but renal colic, a description of which follows.

Treatment.—Common domestic remedies have but little effect in controlling the pain. Until a physician

arrives, Hoffman's anodyne may be freely given, or if the pain is intense, laudanum, in 30 drop doses every hour, till the pain is a little relieved, then omitted. Some physicians think that sweet oil in four ounce doses, several times a day, is an excellent remedy for gall-stones.

Renal Colic. (A Fit of Gravel.) A calculus, a stone, or several of them, not infrequently form in the kidney from urinary sediments. They may remain for a long time, but commonly they pass down through the ureter, which is a small tube leading from the kidney to the bladder. If the stone is of small size and smooth, like a little gravel, no pain may be felt, and the patient may not be aware of its passage; but if the stone is of larger size or rough, most excruciating pain begins suddenly the moment it first enters the fine tube. The nature of the attack is similar to that of gall-stone colic. The pain is caused by the stone passing through a tube too small for its easy exit. When the stone has passed through the tube and reached the bladder, intense pain stops as suddenly as it begins. The pain is usually felt in the loins and shoots along the tract of the ureter to the groin, hip or to adjacent organs, or the pain may remain fixed at one point. Nausea and vomiting usually occur. The fit of pain lasts from a few minutes to several hours. It is often mistaken for colic pain. The pain greatly differs in different cases as to its intensity. In some cases there is an irritation of the urinary pass-

ages and a desire to void the water at short intervals. The urine may and may not contain blood.

The ailment gets the name of a "fit of gravel" because in some cases small gravel-like stones are passed.

The writer has seen to-day a patient just convalescent from an attack of renal colic. The pain began suddenly and continued with remissions for nearly a week; the pain was located just above the groin, and was so intense that morphine was injected to control it. A sore, aching and uncomfortable feeling remained for a week or more after the acute pain subsided. There was nausea and vomiting and obstinate constipation. The urine was not bloody and no frequent desire to pass it, as is very often the case. No large concretion or stone was found, but much gravel or coarse sand. About three years ago the same person had the first attack, which began suddenly but lasted only one or two hours, and did not return. Such is the difference in these attacks. About the only thing that can be done is to allay the pain. The immediate danger in such cases is very little.

Treatment.—When the pain is unbearable, the same anodynes as recommended above for gall-stone colic may be taken. For a convenient remedy in allaying the intense pain no domestic remedy is worth mentioning compared with heavy flannels wrung out in hot mustard water, applied to the side and back; they should be changed often and kept hot. Instead of this a hot sitz-bath may be tried, the patient sitting in the tub so that the water comes up to the waist. This treatment

will not entirely stop the pain, but somewhat controls it.

Painful Urinary Disorders. It not infrequently happens with oldish men after exposure to cold, and after hard work or riding over rough roads, that there gets to be pain and difficulty in voiding water; the desire to pass water becomes frequent and urgent, but a very small quantity is passed at a time, and that with much straining and pain; the urine may accumulate in the bladder, and if no relief is obtained, the patient is in great discomfort. If the hand is pressed down over the region of the bladder, a hard tumor is easily felt after a time, which is the distended bladder. In the great majority of cases this trouble is caused in oldish men by an enlarged prostate gland. No common remedy is of much good in the case. A surgeon should be called immediately, who will at once relieve the trouble.

There is another painful affection, resulting from some irritation, inflammation, or spasm at the neck of the bladder, which is not uncommon. The principal symptoms are a desire to urinate unnaturally often, and the act is attended with much pain. The writer has found for a common remedy nothing better, or even so effective, for immediate relief of the urgent pain as the sitz-bath, as hot as can be well borne, continued for some little time, and repeated as needed.

Acute inflammation of the kidneys in oldish persons is often caused by exposure to cold and dampness, by the rheumatic habit, or by the presence of a calculus (stone)

in the kidney. It usually begins with a chill, followed by fever; the pulse is hard and small; frequently there is nausea and vomiting; the urine is voided drop by drop, is red and may contain blood or pus, and when it settles from cooling it becomes turbid.

The patient complains of pain in the back, which may be dull, or possibly, sharp and cutting, and aggravated by movements. The pain shoots from the kidney in various directions. Only one kidney is usually affected.

The attack lasts from one to three weeks and generally ends in recovery. The technical term is *pyelitis*. Such an affection might be mistaken for renal colic or "a fit of gravel." A warm sitz-bath or flannels wrung out of hot water applied to the back is good treatment. It is well to give the patient one drop of the tincture of aconite every hour for twelve hours, and produce perspiration.

MUSCULAR RHEUMATISM.

A painful affection of the muscles, known to doctors by the above name, is very common, and it will not be difficult generally for any intelligent person to recognize a case of it. The usual exciting cause is an exposure to cold and dampness or the over use or strain of a muscle. It has been a theory of late that lithic acid in the blood is a predisposing cause.

A distinguished physician thus describes the attack: "The development is usually gradual. A dull pain is at first felt in certain muscles which increases, and at length becomes more or less severe. The pain is comparatively slight when the affected muscles are at rest. In certain positions the patient may be nearly or quite free from suffering, the constant pain which may be felt under these circumstances, being of a contusive character, and spasmodic pain occurring from time to time; but in movements which involve contraction of the affected muscles, the pain is severe, cramp like, and sometimes so excruciating that the patient can hardly restrain loud groans or cries.

Voluntary movements which occasion the severe pain are avoided as much as possible, but as it is impossible to maintain rigidly fixed positions of the body as a whole, or of its different parts, the affected muscles are at times thrown into painful contraction, however much the patient may desire to avoid them. Movements occurring during sleep occasion the attacks of pain, and hence, the patient is awakened at brief intervals."

A good example of muscular rheumatism is "a stiff neck," or a lame back with a catch in it on movement, called lumbago. The muscles of the chest and shoulders are quite often attacked.

Much of the lameness and soreness of the muscles which oldish persons feel after unusual work is muscular rheumatism.

The acute form usually lasts from a few days to a week or more, the chronic form continues indefinitely. The muscles of the neck and shoulder are more commonly attacked in the young; in older persons those of the loins, chest and limbs; it may attack the scalp and give rise to soreness and headache.

We have described rheumatism of the chest, page 204, stiff neck, page 199.

The following table shows the difference in symptoms between the disease and neuralgia for which it is often mistaken :

NEURALGIA	MUSCULAR RHEUMATISM.
Pain follows the course of a particular nerve or its branches.	Pain confined to a limited patch over a particular muscle.
Often attacks the weak and those of a nervous temperament. More common in women.	Often attacks strong persons. More common in men.
Movements have but little effect in increasing the pain.	Severely and evidently aggravated by every movement of the part.
Severe paroxysms of pain come on when the part is at rest.	Pain mostly relieved by keeping the muscle at perfect rest.
Tenderness on pressure limited to a few points.	Local tenderness on pressure over entire affected muscle.

Lumbago, or muscular rheumatism of the back, is of frequent occurrence. It is sometimes said of a person attacked with it that he has "dropped a stitch in his back." The patient cannot rise from his chair without a severe catching pain in his back; he does not usually stand straight on account of the pain. Occasion-

ally it comes on very suddenly while the person is stooping. A dull pain is sometimes felt when the person is quiet, but generally it is only when the muscles of the back are used. The appetite and digestion are not usually much disturbed and there is not generally fever. The trouble continues a week or ten days, or it may become chronic. A French physician recommends as an immediate relief, painting the back with this mixture: tincture iodine, collodium, spirits ammonia, each one ounce. For other treatment, see that in following pages for muscular rheumatism in general.

Treatment.—Rest of the affected muscle is essential to a quick cure. Physicians generally apply some counter irritant, such as a mustard draught, ammoniated liniment, the tincture of iodine, spirits of turpentine, or something else which reddens or irritates the skin. Moist heat soothes the irritated nerves of the painful part. Dry heat, applied in some convenient way, is good treatment. Not only theory, but experience, approves of the use of saline cathartics at first.

When the attack is acute and attended with considerable fever and severe pain, it is well to begin treatment by taking a Dover's powder at bed time; it relieves the pain, produces free perspiration, and tends to mitigate the trouble. The tincture of aconite in one drop doses every hour, for awhile, is highly recommended. The fluid extract of cimicifuga (black snake root) has the credit of curing some cases wonderfully well—dose, one teaspoonful every three hours.

Cover the painful part with brown paper and apply a hot flat-iron for awhile. Apply powdered sulphur on hot flannels covered with oiled-silk or cotton batting.

For an internal medicine take the following:

R_x

Ammonii chloridi $\frac{1}{2}$ oz., extract cimicifuga fluid 2 oz., glycerine 1 oz., syrup tolu and the fluid extract of licorice root of each 1 oz., mix, and take a teaspoonful every 2 or 3 hours in one-half cup of water.

NOTE. To get any prescription found in this book filled, take the book to a druggist, and point out to him the one desired.

NEURALGIA.

This affection in its various forms is one of the common painful disorders of modern times, much more common than in the days of our robust progenitors, whose nerves were made of stronger stuff, because they lived, to a greater extent, out door lives, had better digestive powers, breathed purer air in better ventilated houses, and became hardened to the vicissitudes of the weather. Neuralgia is conspicuously a disease of the weak; some one has said that "neuralgia is a prayer of the nerves for better blood." It is true however that persons apparently strong, occasionally suffer from neuralgic pain brought on by exposure.

Neuralgia is defined as a disorder of the nerves, manifesting itself by pain, which appears to follow accurately the course of a particular nerve, or to run into a few, and sometimes into all the end branches of the nerve.

These pains are generally sudden in their onset, and are of a cutting, burning, twinging or stabbing kind, coming on in paroxysms, to be followed by intervals of comparative ease. There is always a tendency for the pain to shift from one part to another, so that the common saying that "pain which changes round is neuralgia," is generally true. No fever heat attends pure neuralgia; this is one distinguishing mark. Another very distinctive thing is that the pain is remittant; other kinds of pain, such as that from inflammation and rheumatism, are dull and continuous to a much greater extent.

Frequently neuralgia is periodical, that is, the pain comes on at just about the same hour every day; in such cases quinine is by all means the best remedy.

Neuralgic pains are very uncertain in their duration; they may end in a few hours or days or possibly continue for years. A surgical operation, such as cutting or stretching the nerve, is sometimes required to effect a cure. On page 229 may be found a table showing the difference in symptoms between neuralgia and muscular rheumatism—a disease which is liable to be mistaken for it.

Space allows only an enumeration of the causes of neuralgia. The chief predisposing cause is an inherited tendency to nervous diseases. The chief exciting causes are anæmia, or impoverishment of the blood, debility, great fatigue, exposure to cold and dampness, injury of the nerve or pressure upon it, malarial poisoning, inflammation of the sheath of a nerve, etc.

The majority of neuralgic patients are women, because for one thing, they are much oftener anæmic. Intercostal neuralgia is common in women; it is described on page 203. Facial neuralgia, another common variety is described on page 199.

Treatment.—This is the important part of the matter. When the nerve from which the pain proceeds is superficial, external applications of various kinds are known, which, to a remarkable degree, allay the pain. Both heat and cold have been used with great benefit. Flannels wrung out of mustard water, as hot as can be borne,

or hot poultices are often used. They should be changed often, as the moist heat is the curative agent.

Dry heat may be applied by means of hot salt or sand in bags. Some patients have learned to cure the pain by exposing the aching part to a hot fire for a time till the pain stops.

There are several kinds of liniments known to doctors which almost certainly relieve the pain; the following are among the best:

Take chloroform, laudanum, tincture of belladonna and essence of peppermint, of each one ounce, mix and apply on lint. The mixture is poisonous internally.

Take tincture of aconite, capsicum and laudanum, of each one ounce, mix and add to it three drachms of menthol and apply on lint; poisonous internally.

A mustard draught sometimes allays the pain. Spirits of turpentine applied on flannels may be tried.

Equal parts of gum camphor and chloral hydrate rubbed up till liquified, and applied with a brush, is a favorite remedy with some doctors.

When neuralgia is dependent upon debility or anæmia, as it often is in women, some preparation of iron is called for. Dr. Anstie, London's celebrated specialist, prefers in such cases the tincture of the chloride of iron in 20 drop doses; it may be taken in a little glycerine and sugared water after each meal. It increases the appetite and the digestion and helps to make good blood. An elixir of the chloride of iron and gentian is not disagreeable to the taste, and is an excellent medicine; it can be

bought of any druggist. Dose two teaspoonfuls after meals.

For all periodical neuralgias, quinine is the remedy *par excellence*; no other medicine is worthy to be compared with it in such cases.

Sciatic Neuralgia belongs to middle and advanced life, and is more common in men than in women. The predisposing causes of neuralgia in general have little to do with developing sciatica. One writer says that it ranks next in frequency to intercostal and facial neuralgia. The attack is apt to begin during the damp and cold months. Probably, exposure and strain are frequent causes.

The pain sometimes begins suddenly; more commonly more or less pain is first felt in the back and about the hip, and a feeling of weakness in the leg, soon the pain becomes neuralgic in character, and shoots down the outer side of the leg, following the course of the sciatic nerve, the pain is often sharp and paroxysmal, at other times it is a burning feeling. Sudden movements of the limb occasion exacerbations of pain. Numbness and spasms of the limb are sometimes felt.

Patients often complain of a cold feeling in the leg, of a sensation as if insects were creeping over the skin. Pain is not always severe and the attack may end in recovery in a week or two, or it may continue indefinitely.

Treatment.—A distinguished physician says: "I have always employed baths in the form of hot sitz-baths and always as an adjuvant to other methods of treatment. The

water should be as hot as the patient can bear, and the bath should last for five or six minutes. They may be repeated once or even twice a day; they are followed by a certain amount of relief."

In many cases of sciatica, the writer has found that dry heat has an excellent effect. Two French physicians say that they have completely and permanently cured the disease by enveloping the limb in a thick coating of sulphur, spread on flannel. For further treatment, see the treatment of neuralgia in the preceding article.

Acute Articular Rheumatism. As this is one of the painful affections, we shall briefly describe the initial symptoms. When the disease continues a week or two, as it generally does, it is called a "rheumatic fever." The onset may be quite sudden, or, in a certain number of cases, fever with its attendant symptoms precedes the pain and swelling of the joints; but in more cases, fever and pain in the joints are simultaneous in beginning.

Pain, tenderness, heat, swelling and redness of the skin attack some joint; the pain is not usually severe when the joint is at rest, but the slightest motion excites it; on this account the patient keeps the limb in a fixed position as long as possible; one joint after another may be attacked in quick succession, or the trouble may be confined to one joint for a longer time, and then rather suddenly leave it to seize another, usually on the opposite side of the body. Fever with the so-called fever symptoms always attends severe attacks.

The affection may be sub-acute, that is, mild, and only one or two joints affected. Within late years great improvement has been made in the treatment of articular rheumatism. A physician should be called early. This kind of rheumatism is very much more serious and requires more skillful treatment than common muscular rheumatism, which has been described. A careful study of the symptoms and signs of the two diseases will enable any person to distinguish one from the other.

Chronic Rheumatism is a painful affection of the joints which runs a chronic course, and exists in all grades of severity. It is sometimes a sequel of the acute form. The most common predisposing cause is the so-called rheumatic diathesis. Debility, and exposure to cold and dampness incident to out-door occupations, are exciting causes. The chief symptoms are pain and stiffness of the joints. There is not usually that redness and swelling which is noticed in acute rheumatism.

The pain is of an aching, dragging, wearying kind, attended with a sensation of weight in the limb, and is worse at night; the patient can predict by the increase of pain the coming of a storm with the accuracy of a barometer. Several joints may be attacked in succession, or after a time the trouble becomes fixed in one joint.

There is a form called rheumatic arthritis or deformans in which, as the disease progresses, the joints become greatly deformed. There is a chronic form of muscular

rheumatism in which the soreness and lameness is in the muscles, not in the joints.

Treatment.—Dry heat, applied in some convenient way affords great comfort and marked relief to the pain. A liniment composed as follows is very beneficial: tincture cayenne, aqua ammonia, spirits turpentine, olive oil, each one ounce, laudanum and tincture aconite, each one half ounce. Before applying the liniment the joint should be bathed for awhile in hot water; after rubbing the liniment thoroughly into the skin cover it with cotton batting or oiled silk.

For an internal remedy nothing is better than the following mixture which is used at the New York hospital: iodide potassium, salicylate of sodium, each two drams, wine of calchicum seeds two fluid drams, and water sufficient to make four ounces. Mix. Dose, a teaspoonful three times a day, taken in water. If there is much debility the compound syrup of the hypophosphites will be very beneficial.

An English physician has for four years used as a local or external application a liniment made of the oil of wintergreen and olive oil, equal parts. His success has been remarkable, the pain disappearing in four to six hours. Over a hundred patients thus treated have received great benefit, excepting two.

The liniment is rubbed upon the rheumatic joints, and then they are covered with cotton-batting. It is said to cure in the chronic as well as in acute rheumatism.

Acute Abscess. An abscess is one of the results of local inflammation. Throbbing pain, heat, redness and swelling, which are the usual phenomena of inflammation, are first noticed at some part about to be the seat of an abscess. The swelling increases and the tissues adjoining become tense and painful. After a few days it may be noticed that the skin becomes of a purple tinge in the center of the swelling and in time, some point becomes soft and "boggy"—a sign that pus (matter) has formed within and tends to point. At this stage the abscess may be lanced, the pain relieved, and the cure hastened.

If the inflammation is extensive and the abscess large, the patient will probably have an inflammatory fever, and as suppuration takes place, he will have one or more chills, and may sweat profusely. An abscess may come on any part of the body without any apparent cause. The hands in working people are often the seat of abscesses; the cause in such cases is some injury.

Treatment.—The application of ice, or ice-cold water in the first stages of local inflammation may sometimes abort or stop the formation of an abscess, but the usual practice is to poultice an abscess till it points.

A distinguished surgeon writes: "Poultices relax the skin, promote perspiration, soothe pain, encourage the formation of pus, and expedite its progress to the surface. They should be large, soft and light, and may be made of bread and water, or linseed meal, or chamomile flowers boiled till they are soft, or of bran sewed up in

a flannel bag, which may be dipped in boiling water as often as they become cold. If it is desirable that the poultice be light, powdered slippery-elm is excellent." In many cases laudanum, poured upon the poultice before it is applied, improves its anodyne effect. An abscess can be opened without pain by applying to the skin a little bag containing powdered ice and salt, in equal quantities, till the skin is partly frozen and benumbed.

Felon (Whitlow.) In some of its forms this is an extremely painful affection of the fingers or thumb. It is a curious fact that it is more common in women than in men. There are two forms: the superficial and the deep.

In the superficial variety the soreness begins immediately around or under the nail, at the side of the finger, or near the end. The swelling may not be great at first but the part is very tender on pressure, and somewhat painful.

In the most superficial variety the inflammation is confined to the skin or just under it at the side of the nail, and is sometimes caused by a slight injury or by some poisonous matter.

A little pus soon collects under the skin and tends to come to the surface; if it is let out, the trouble ends, if not, inflammation may extend to deeper parts, or under the nail, and painful and tedious trouble result.

In the second variety inflammation begins in the

deeper tissues of the finger, or extends on account of neglect of the first variety.

When the palm or side of the finger, thumb or any part of the hand feels as if a fine, short, sharp splinter had entered the skin, and if there is pain, redness and swelling without known cause, one may be pretty well assured that a form of a whitlow, commonly called a felon, is coming. The finger is much swollen, very tender on pressure and there is throbbing pain. If the inflammation is not promptly arrested, matter forms in the deep tissues in three or four days. The pus presses under the thick skin and tends to point; if the abscess is not opened the pus burrows and may find its way to the sheath of the tendon or to the bone, producing a painful and serious affection. There is considerable constitutional disturbance; the patient is sick and feverish. In the worst forms the throbbing pain is so great that the person is most miserable and robbed of sleep and rest at night. This is especially the case if the inflammation begins, as it sometimes does, near the bone or in the sheath of a tendon.

Treatment.—As soon as it is suspected that a felon is coming the following means of aborting or stopping it may be tried: Take of soft soap and flaxseed or Indian meal, equal parts, stir them together and make a poultice, envelop the finger in it, applying it snugly, renew the poultice every four hours. The finger should be examined from time to time and if anything looking like a superficial fester or blister is seen, it should be pricked

or cut open with a sharp penknife. This remedy is like the popular lye treatment, which is soaking the finger for awhile in lye; it is simple and there is good reason for believing that in many cases it arrests the inflammation; there is, at least, nothing more likely to do it. This treatment should begin at the very first signs of a felon.

Should the pain and swelling continue for two or three days an abscess is inevitable; then a large flax-seed poultice, or any good poultice, should be applied and changed often. As soon as pus collects the felon should, by all means, be opened; nothing else will relieve the pain, put an end to trouble, and prevent a destruction of the finger or a part of it.

Boils, (Furuncles.) The causes of boils are various. It is usually said that they are caused by "bad blood." This may be the case in some instances, in others it is not; for instance a change of food is sometimes the cause in persons apparently healthy. Irritation of the skin by blisters, strong liniments or poultices is occasionally followed by a crop of boils. A boil begins as a reddish pimple which may be soon tipped with a little water blister in the center. The pimple increases in size and becomes dark red or purple in color; at the same time the pain increases; it is at first stinging, at last a throbbing pain. Generally in about the fifth day pus or matter forms, and from the seventh to the ninth a core is discharged, leaving a central opening, and the

trouble subsides. This is the typical and regular boil, but in many cases the course is different. If the boil is deep seated it pursues a longer course. In the smaller number of cases the boil does not suppurate, it is then called a "blind boil," not usually as painful as the other variety.

A Carbuncle is a large and malignant boil, sometimes dangerous to life; it indicates constitutional debility. Its large size and many openings distinguish it from an ordinary boil; it usually appears on the back or back of the neck, and is a very painful affection, continuing for two or three weeks.

It is claimed by some that the application of ice, or the tincture of iodine, stops the boil, if applied on its first indications. Flaxseed, slippery-elm or other poultices with a little laudanum poured upon them should be put on to a boil; they serve to soften the tissues, to allay pain and hasten suppuration. A few days' pain and suffering may be saved by lancing a boil after applying a freezing mixture, made of pounded ice and salt, equal parts. If several crops of boils tend to come, the syrup of the hypophosphites may be advantageously taken. The sulphide of calcium in one-sixth grain doses, four times a day, has a great reputation as a preventive of boils.

PART IV.

SOME COMMON AILMENTS.

TAKING COLD.

This paper is epitomized, in part, from a recent monograph written by a physician in Bellevue Hospital, New York City.

It is not commonly the case that a cold is contracted simply by exposing the whole body to a low temperature, excepting the exposure continues for a long time. A cold is taken when some part of the body not accustomed to such treatment, is exposed to a draught of cold, moist air. The moderately cool days of Spring and Fall, the seasons in which the prevailing condition of the atmosphere is one of moisture, are likely to produce colds, and particularly when there is a change from a dry atmosphere to a cooler and moist one. Riding or sitting after exercise sufficient to produce perspiration, thus allowing it to become too suddenly checked, is not an infrequent cause of a cold. Draughts of cool, moist air upon the neck while sitting is a common cause. Paradoxical as it may seem, the best "lung protector" is a pair of boots with thick soles, impervious to moisture, for a "cold in the chest" is much more frequently caused by getting the feet damp and cold, than by

wearing insufficient clothing about the chest. Living in hot rooms, and going out only semi-occasionally into the cold moist air, is a frequent cause of colds.

"Cold is the most common cause of disease in temperate climates, especially in the changeable climate of this country. It can excite disease directly, and can affect probably all the organs of the body, causing either disturbed function or organic mischief. Cold, when severe, contracts the vessels; interferes with the circulation, and all vital activity; and in this way may cause death. But it is with moderate degrees of cold we have chiefly to deal. A momentary exposure to a cold draught is as frequent an excitant of disease as general exposure for a long time. A cold draught playing on the cheek may cause facial paralysis, sore throat, or bronchitis; that is to say, cold applied locally may excite disease in the neighborhood of its application or in distant organs. It is probable, therefore, that cold may act in several ways: (1) it may interfere with circulation; (2) it may affect the extremities of nerves and excite disease by reflex action; or (3) it may check secretions of the skin, the mucous membrane, etc."

A cold is not really a mere local inflammation, because one rarely contracts a cold without feeling more or less general disturbance. Its onset is rarely marked by a fully developed chill, but usually there are quite well marked chilly sensations, pains in the bones, a feeling of general weakness, loss of appetite, a dull headache, perhaps, and other evidences that the whole system is affected by it. Furthermore, these symptoms usually set in before the local inflammation declares itself.

How shall a cold be aborted when one feels the premonitions of it? A convenient, yet effective remedy, is

the use of heat, both externally and internally; this seems to act by restoring the equilibrium of the circulation. Hot drinks, such as camomile tea, ginger tea or any hot herb drink should be taken in considerable amount, the feet and legs heated for a while before the fire, or a hot foot-bath may be used.

The tincture of aconite in doses of one drop every half hour for five hours is excellent treatment. A sweat taken in some way is an effective means of breaking up a cold. In addition to these means we possess two remedies which have a notable influence on the general circulation which results from a cold; these are quinine and a Dover's powder.

In connection with the treatment above described, 6 to 8 grains of quinine and 10 grains of Dover's powder should be given to an adult. The quinine probably acts as a stimulant to the circulation and the Dover's powder tends to produce a warmth of the skin and free perspiration and it certainly has a most remarkable effect in breaking up a cold. But some persons are disagreeably affected by the opium in it. Quinine is free from these objections, though in large doses it is apt to make a buzzing feeling in the ears. Hot lemonade or hot cider with a little cayenne pepper added is a favorite remedy with some persons in preventing or breaking up a cold. If a cold is taken through the day, or an exposure which would be likely to result in a cold, this treatment should, by all means, be begun in the early evening. If these measures are undertaken sufficiently

early and properly carried out the patient will awaken in the morning, perhaps after a night's refreshing sleep, almost entirely relieved of any evidence of a cold; if not, the threatened attack will be mitigated. If treatment is not successful in arresting a cold, or if no attempt is made in the right direction, the sequel may be a cold in the head (acute nasal catarrh or coryza), a sore throat (pharyngitis), hoarseness or loss of voice (laryngitis), acute tonsillitis (Quinsy), or bronchitis. These affections are described below in their order.

A Cold in the Head. Generally persons do not regard a cold in the head of sufficient importance to require treatment. The attack is at least very disagreeable and may continue one or two weeks, and possibly, run into a chronic nasal catarrh. By timely treatment it can be palliated. The drugs which belong to the mint series seem to have a good effect in controlling the inflammation.

The following may be given in the form of a snuff: Menthol pulv. 2 grs, bismuth sub. carb. 1 drachm, white sugar 1 drachm and a half. Mix.

There are certain remedies which are very beneficial in the form of inhalations. Patients find their use agreeable on account of the relief obtained. A popular German remedy, known as Hager's, is as follows:

Carbolic acid 1 oz., strong alcohol 3 oz., caustic ammonia 1 oz., distilled water 2 oz.

This is placed in an open-mouthed bottle and the fumes inhaled into the nostrils. The tincture of golden

seal, with equal parts of warm water, snuffed into the nose, is effective in allaying the inflammation and cutting short the attack.

Acute Pharyngitis means an ordinary sore throat, and consists of a catarrhal inflammation of the mucous membrane of this part. Gargles of a weak solution of alum, borax, chlorate of potash or tannin are very beneficial. A nice way of using the potash is in this prescription: Chlorate potash 30 grains, pulverized gum arabic, white sugar, each $\frac{1}{2}$ oz. Take a small portion on the tongue and allow it to melt in the mouth. In the act of swallowing, it is distributed upon the inflamed throat.

Acute Laryngitis means an acute inflammation of the mucous membrane of the larynx. The larynx is the upper part of the windpipe and the part in which the vocal apparatus is situated; hoarseness, or loss of voice results, if this part is inflamed; it may be the only symptom, or there may be some soreness and more or less cough. In the minds of the common people a certain amount of gravity attaches to this loss of voice, but if it results from a simple cold, as it ordinarily does, it is not of serious significance. In the majority of cases, the patient first has a cold in the head or a sore throat, but exceptionally inflammation first seizes the larynx. The loss of voice or hoarseness may continue one or two weeks, and almost invariably ends in recovery.

Inhalations of medicated vapors or steam is the best form of treatment, as the remedy is thus applied directly to the inflamed part. A little tar, carbolic acid solution, benzoin, eucalyptol or camphor may be used in an inhaler, several times a day. An inhaler can be bought of a druggist who will instruct the patient in its use.

ACUTE TONSILLITIS.

This distressing affection is most common in persons from 15 to 25 years of age, rare in early childhood and after 30 years. Many persons seem predisposed to it, and suffer from recurring attacks. In a typical case, and one of considerable severity, the symptoms are well marked and distinctive, so that the diagnosis is made out without much difficulty.

The disease sets in with chilliness, fever, headache, pain in the back and limbs, and the patient feels miserably sick from the first. The pulse is unnaturally full and strong; the tongue is soon covered with a thick, creamy coat; much phlegm collects in the throat and saliva in the mouth; the breath becomes foul; there is pain and soreness in the throat from the onset; swallowing is attended with pain and difficulty; in the later stages, liquid food is often forced out through the nose; the patient finds it difficult to open his mouth; the voice is changed, becoming thick, guttural and nasal, and the patient makes a snoring noise during sleep; the glands below the ear are often swollen externally, and are tender to the touch; deafness is sometimes complained of, and pain not uncommonly shoots up into the ear on the affected side. On examination of the throat, one tonsil, possibly both, will be found of a bright red color and greatly swollen, the redness and inflammation extend over adjacent parts of the throat, to the uvula and soft palate.

This condition of things continues for four or five days, and then the patient gets convalescent, or the case may terminate in another way: inflammation may go on to suppuration, that is, till an abscess is formed in the tonsil. In the latter case, the symptoms are aggravated, more throbbing pain and much more difficulty in swallowing are complained of, till the abscess breaks or is opened and discharges matter, after which rapid recovery takes place. It is not an easy thing to tell, the first three or four days, whether an abscess will form or not. The finger may be introduced into the throat and the tonsil examined; if it is soft and boggy, matter is probably collecting. Not infrequently, small curdy masses or spots are discovered upon the inflamed tonsils.

Follicular Tonsillitis closely counterfeits diphtheria in its general and local aspect, and is often mistaken for it. The patient is seized rather suddenly, as in diphtheria, with fever symptoms, and a sore throat upon which, on examination, whitish spots are seen. The onset is marked usually by decidedly chilly sensations, followed by a high fever (103° or 104°) in children; pain in the throat may be considerable. The affection runs its course in from three to five days or more, and spontaneously ends in recovery. Soft, cheesy masses or spots, which are easily brushed off, collect upon the inflamed tonsils.

Treatment. An attempt should be made to arrest or abort tonsillitis. As a tendency to constipation always

exists, and for other reasons, a saline cathartic should be at first given. A hot foot-bath and plentiful drinks of herb teas to produce perspiration, or some other manner of taking a sweat, is excellent treatment. If at hand, or if the medicine can be obtained, the tincture of aconite in two drop doses every hour, to an adult, for five or six hours, till the skin is moistened, or till the effect of the medicine is noticed, should be taken. Many physicians advise that the tincture of belladonna in equal quantities be taken in combination with the aconite. It has a special effect upon the throat.

If a person is subject to attacks of tonsillitis, the following medicine should, by all means, be taken at the first intimation of an attack: salicylate of sodium 2 drachms, water 6 ounces, mix, and take a teaspoonful every two hours. Many physicians prescribe a gargle of water and common cooking soda (bicarbonate) for its power of arresting the inflammation. The writer has seen excellent effects from the following treatment: take glycerine 7 drachms, the tincture of iron 6 drachms, mix, and add one teaspoonful to one-half cupful of water, of which a part should be swallowed, and a part used as a gargle every three hours.

When it seems probable that an abscess is gathering, a large flaxseed poultice should be applied to the neck

NOTE. In some cases, great relief is obtained by inhaling the vapors from vinegar and water, equal parts. In one case, which the writer remembers in particular, it seemed almost impossible for the patient to breathe for a few hours before the abscess broke; by the use of the above remedy, his condition was greatly improved.

over the tonsils, and as soon as the abscess is "ripe", it should be broken either by pressing quickly upon it with the finger, or by the use of the lancet in the hands of a physician.

There is a form of tonsillitis, called catarrhal, in which the inflammation is superficial with no tendency to the formation of an abscess. Some young persons have chronic enlargement of the tonsils; they are much more subject to acute tonsillitis of the catarrhal variety.

In case the inflammation results in an abscess of the tonsil the disease is often called quinsy.

To one having little experience with these distressing attacks, it would seem, in the worst cases, that the patient was in imminent danger of dying, the difficulty of breathing and swallowing are so great, but it is rare that a case terminates in this extreme catastrophe.

COUGHS AND COLDS. BRONCHITIS.

Acute Bronchitis means an acute inflammation of the mucous or lining membrane of the bronchial tubes. In its ordinary form it is one of the most common affections. Its danger to life depends upon the age of the patient and the size of the tubes affected. Ordinarily, the inflammation is confined to the larger and medium sized tubes, but those of smaller, and the smallest size may be affected, if so, and if the patient is at either extreme of life—an infant or an aged person—the disease becomes one of very great danger, and receives the name *capillary bronchitis* or *suffocative catarrh*. In the latter case, the disease generally begins as an ordinary bronchitis, but the inflammation extends from the medium-sized tubes to the smaller ones.

Acute Bronchitis in oldish persons tends to run into the chronic form, sometimes called a winter cough, and is a troublesome affection. There is no doubt but that the lining membrane of the bronchial tubes takes on a “habit” of becoming easily inflamed, after a severe attack of bronchitis; slight exposure thereafter is only required to incite another attack.

Measles and whooping cough are attended with bronchitis; the chief dangerous complication occurs when inflammation extends to the finer tubes. On account of

NOTE. The bronchitis of infancy and childhood is described in that part of this book, treating of the diseases of children, including capillary bronchitis; the latter affection is not nearly so common as the bronchitis of the larger tubes; it is very rare in a strong adult.

all these facts, a peculiar importance attaches to cases of bronchitis.

“The habits of life have an important influence in the causation of bronchitis. The practice of living in heated rooms, especially where gas is largely consumed, and of breathing the vitiated atmosphere produced by the assemblage of large numbers of persons in apartments, is undoubtedly a fertile predisposing, as well as exciting, cause of the complaint; so also is the practice of keeping children too much within doors on the one hand, or, on the other, of exposing them to inclement weather when insufficiently clad. Temperament can scarcely be considered a predisposing cause, but the state of the general health exercises a powerful influence. A weakly constitution, or one weakened by overwork, improper food, &c., predisposes to bronchitis. Again, certain occupations are favorable to the development of bronchitis. Independently of the fact that living or working in heated and confined rooms predisposes to the disease, such occupations as lead to the inhalation of irritating particles, as those of steel, cotton, &c., give rise to it.”

Bronchitis is usually preceded for a few hours or for a day or two by coryza and perhaps by a sore throat and hoarseness; there is pain and soreness behind the chest bone, slight oppression of breath, hurried breathing and a paroxysmal cough. If we add to this chilly sensations, moderate fever, and more or less pain in the back and limbs, we have the main features of the attack. The fits of coughing at first bring up a little clear, frothy mucus, or the cough may be very dry. As the case progresses, the matter raised may be abundant, and yellowish or greenish in color, and perhaps streaked with blood. The fever soon subsides, but the patient's cough may continue a long time, or stop within a week or more.

Bronchitis is apt to be mistaken for pneumonia and pleurisy, as they are attended with a cough and with fever. The following table gives some points of difference.

BRONCHITIS.	PNEUMONIA.	PLEURISY.
Begins with chilly sensations.	Usually begins with a decided chill.	Begins with chilly sensations —possibly, a chill.
Usually begins with a cold in the head, sore throat and hoarseness.	No symptoms of this kind.	No symptoms of this kind.
No stitch pain in side, but sometimes pain under chest bone.	Stitch pain in side, generally.	Stitch pain in side.
Moderate fever.	High fever.	Moderate fever.
Paroxysms of cough always.	Cough not prominent, often slight or wanting.	Cough slight or wanting, at first.
Matter raised at first, clear, light, frothy mucus.	Matter often is mixed with blood, called the "rusty sputa."	Matter raised scanty and light colored.
If one places the ear to the back under the shoulder blades, noisy wheezy, and whistling sounds may be heard on both sides.	No such sounds, fine crackling sounds may be heard at first over some part of lung.	No such sounds are heard.

Treatment. The first stage of bronchitis is the "dry stage"; the lining membrane of the tubes is inflamed, swollen, and inclined to be dry. Severe paroxysms of coughing bring up only a little mucus; coughing is painful and increases the inflammation. The primary object of treatment in this stage is to soothe the irritated membrane and to produce a watery secretion upon the inflamed surface, and prevent the severe cough. A simple remedy, and one at the same time of remarkable virtue, is the linseed or flaxseed oil. It has a particular

affinity for the mucous membrane of the bronchi, and taken in considerable quantity, it increases mucous secretions, in other words, it loosens the cough. Flaxseed meal, of course, contains the same oil; on this account, flaxseed tea is a popular remedy for a cough.

Any druggist will make an agreeable cough mixture from this formula: Linseed oil 4 ozs, emulsion gum arabic 2 ozs., glycerine $\frac{1}{2}$ oz., lemon juice 2 drachms, spirits cinnamon 2 drachms and syrup tolu sufficient to make 8 ozs. Mix. Dose, 1 tablespoonful 5 or 6 times a day. Two teaspoonfuls of the oil may be taken in a little milk 5 or 6 times a day. Infusions of slippery-elm bark or gum arabic are good remedies in the first stage.

If in this stage the skin is hot and dry, it is good practice to take remedies which moisten it; for this purpose add to two ounces of syrup of ipecac, 20 drops of tincture of aconite and take one teaspoonful every hour for awhile, and let the person remain in a warm room or in bed. If the cough is hard and dry, an excellent medicine for the first day or two is the compound syrup of wild cherry in doses of two teaspoonfuls every three hours.

A poultice made of three parts flour to one part of ground mustard, applied to the chest, is undoubtedly beneficial in the first stages.

The following cough mixtures are among the best that can be given after the first day or two.

R

Muriate ammonia $2\frac{1}{2}$ drachms, fl. ext. licorice and syrup

ipecac each 2 ounces, syrup wild cherry $1\frac{1}{2}$, water to make 6 ounces. Mix. Dose, a teaspoonful in much water 4 or 5 times a day.

R

Syrup squills 2 ounces, syrup ipecac and syrup senega each $\frac{1}{2}$ ounce, spirits chloroform $\frac{1}{2}$ ounce, syrup tolu to make 6 ounces. Mix. Dose, a teaspoonful 4 or 5 times a day.

The following has gone the rounds in many towns as a cure for a severe cough:

R

Fl. ext. scutillaria, tinct. opii. camph. each 1 ounce, chloroform 1 drachm, syrup tolu 2 ounces. Mix. Take a teaspoonful every 3 hours.

At Bellevue Hospital these cough mixtures are used, if after the first or dry stage the cough continues and is urgent, the mucus tenacious, scanty and difficult to raise:

• R

Muriate of ammonia and the extract of licorice each 2 drachms, paregoric 2 drachms, water sufficient to make 6 ounces. Mix. Dose, one teaspoonful in considerable water every 3 hours.

R

Potass iodide 3 drachms, tincture tolu and fl. ext. wild cherry 1 drachm, simp. syrup 1 ounce, Hoffman's anodyne 2 drachms, water 1 ounce. Mix. Dose, 1 teaspoonful in water every 3 hours.

R

Carb. ammonia 50 grs., potass iodid, 3 drachms, syrup wild cherry and Hoffman's anodyne each $1\frac{1}{2}$ ounce. Mix. Dose, one teaspoonful every 3 hours.

NOTE. Any good druggist will fill these prescriptions.

At the New York Hospital the following mixtures are used:

R̄

Muriate ammonia and chlorate potass each 1 drachm, extract licorice $\frac{1}{2}$ drachm, cinnamon water to make 4 ounces. Mix. Dose one teaspoonful every 3 hours.

R̄

Ether 3 drachms, tincture hyoscyami, the syrup of wild cherry each 1 ounce, syrup tolu 1 ounce, water to make 4 ounces. Mix. Dose two teaspoonfuls as required.

R̄

Potass iodid 3 drachms, Hoffman's anodyne 1 ounce, syrup wild cherry 3 ounces. Mix. Dose, one teaspoonful every 3 hours.

The following is the renowned Stoke's cough prescription. Carb. ammonia 32 grs., fl. ex. senega and fl. ex. squills each 1 drachm, paregoric 4 drachms, water 4 drachms, syrup tolu, q. s. to make 6 ounces. Mix. Take a teaspoonful every 3 hours if required, to loosen and prevent urgent cough.

CHRONIC NASAL CATARRH.

Chronic inflammation or catarrh of the mucous membrane of the nose is classified into three varieties. (1) *Simple*, (2) *Hypertrophic*, (3) *Atrophic*. The first form or simple nasal catarrh is a common affection, characterized by a discharge of mucus or muco-pus, and most frequently accompanied by pharyngitis. Causes. Residence in damp, changeable, cold localities, causing a repetition of the acute form, with a constitutional predisposition. It usually eventuates, if untreated, in the second or hypertrophic form, in which the normal elements of the mucous membrane may become permanently thickened. There is usually an excessive secretion of very tenacious mucus, with more or less narrowing of the nasal passages, thus causing a serious obstruction to normal respiration through the nose. The third or atrophic form is less common than the preceding, and is far more serious and less manageable to treat; it may occur as a sequence of the hypertrophic form.

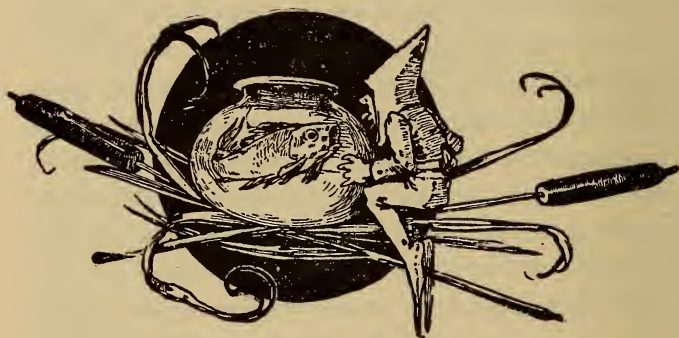
Treatment. In the first, or simple form of chronic catarrh early treatment is the most satisfactory, but this even to be effective must be treated assiduously and persistently. Good hygiene and proper diet are important auxiliaries, both as prophylactic and curative measures; healthy activity of the skin, and proper clothing are important to look after. Remedies by the stomach are of doubtful efficacy only so far as they remove or

alleviate predisponent causes. Cod liver oil, and chlorate of potash, if scrofula is suspected, are useful.

Local treatment is most important, and this first consists of thorough cleansing of the parts before the application of the remedy selected. For the mechanical accomplishment of the first object many methods and instruments have been devised; probably the best treatment is with the atomizer or appropriate syringe. If the secretions are very hard to remove, the nasal passages should be sprayed with an alkaline and antiseptic solution like the following: bi-borate of soda one-half dram, Listerine one ounce, water four ounces, to be used with atomizer. Should the secretions be very abundant, the syringe would be more effectual in removing them. After having cleansed the passages as recommended, treatment may be continued with astringent or alterative solutions, such as tannic acid, five grains to the ounce of water, or sulpho-carbolate of zinc of same strength. In the hypertrophic form, where there is much thickening of the mucous membrane, more radical measures are required; the following is used successfully in many cases: iodine crystals 4 grains, iodide potassium 10 grains, iodide of zinc, carbolate of zinc, of each 15 grains, Listerine 1 ounce, water sufficient for 4 ounces; to be used as a spray, with atomizer. In cases of much stenosis, or narrowing of nasal passages, surgical measures are sometimes advisable.

In the atrophic form, the prognosis is unfavorable as to cure, yet much may be done to remove many of the

annoying features of the disease by applying to some skillful specialist.



LA GRIPPE. EPIDEMIC INFLUENZA.

Influenza in one of its forms closely resembles a severe cold, but it is something different. This remarkable distemper has received various names. Italian physicians gave it the name Influenza, the French, La Grippe, the Germans, Blitz or Lightning Catarrh. It has also been called Epidemic Bronchitis, Epidemic Catarrhal Fever, etc.

The first epidemic of it in this country of which we have a clear account occurred in 1647, since which time many light outbreaks have been known. One occurred in 1832. During the latter part of the year 1879, and the summer of '80, the disease prevailed to some extent in the northern part of the United States and in Canada. The writer remembers of attending a few cases in the field of his practice in 1879.

It is a remarkable fact that the disease always travels from east to west.

Nothing of the severest form of epidemic influenza was ever known in this country till the great epidemic of 1890 and '91 struck its inhabitants. The distemper originated in Russia about Nov. 1, 1889. By December 15th the disease had spread over Europe. In some way it rapidly crossed the wide Atlantic and arrived here about December 20, 1889. Within fifteen days after its outbreak in New York city, fully two hundred thousand persons were attacked.

Medical men who have studied the subject believe

that the disease is likely to visit this country in its severe form from time to time—that it has become naturalized here. The disease is probably caused by some specific infecting poison or germ. A Chicago physician thought he made the discovery that the disease is caused by a microbe contained in star-dust. One writer says of this discovery: “this striped microbe discovered in Chicago is unique and must be a wonderful bug.”

A difference in opinions exists among good authorities about La Grippe being contagious. If it is a germ disease, it would seem more likely that it is contagious. The disease has two distinct varieties.

1st, the nervous, sometimes called the neuralgic form.

2d, the catarrhal.

The former is the more common and is attended with lesser danger to life. Among the common symptoms are these: sudden onset, chilly sensations running down the back, fever, dizziness, very severe frontal headache and pain in the eye balls, pains in the bones, joints, hips, back, soreness of the muscles, and neuralgic pains darting through the body. Sometimes there is a high fever (103° to 105° .) The tongue is coated and the breath foul; the appetite gone; constipation, as a rule, exists. Very severe frontal headache is an early and characteristic feature of the attack.

A curious thing has been noticed in some cases, namely: the appearance of a rash upon the skin resembling that of scarlet fever.

The physical and mental prostration which attend the attack is remarkable. Uncomplicated cases of this form run a short course; the violence of the attack is at an end in two or three days, but the patient remains without strength or appetite, and sweats easily on slight exertion for a considerable time. This description applies to severe cases. Mild cases, in which pain is not severe, and the depression not great, occur in all epidemics. Instances in which strong adults die of this form of La Grippe are rare.

2d. The catarrhal form, if severe, is attended with much more danger. In addition to more or less of the symptoms described above, the mucous or lining membrane of the air-passages, and sometimes that of the alimentary canal, becomes inflamed.

Beginning with chilly sensations, fever and pain, there is soon a feeling of fulness or tightness in the head, running from the eyes, sneezing, sore throat, hoarseness, bronchitis and a cough. The fine bronchial tubes may be affected, and result in catarrhal pneumonia. If the mucous membrane of the stomach is attacked there is pain, nausea or vomiting; if that of the bowels, colicky pains and, often, diarrhœa result.

The catarrhal form runs a longer course—from four to ten days. Convalescence is slow; the patient is weak and unfit for physical or mental work for a long time; relapses easily occur. An Irishman is said to have given this description of the affection, “a disease that keeps you sick fifteen days after you get well.”

An attack may prove fatal to the young, or to the weak and aged, or to those suffering, at the time, from chronic disease, owing to the catarrhal complications—capillary bronchitis, pneumonia, or, possibly, to the great physical depression which attends the disease.

Treatment. If the attack is at all severe, and even if it is not, the patient's chances are much better if he remains in bed where the temperature is uniform. It is well at first to take a laxative of some kind. Castor oil, or an emulsion of castor oil, answers the purpose.

If the pain is severe a pill, composed of $2\frac{1}{2}$ grains of phenasetine and $2\frac{1}{2}$ grains of salol, taken every hour for awhile, has a remarkably good effect, and if it can be obtained it should be preferred to all other remedies in use, at the present time.

Quinine is another medicine almost indispensable in the treatment of the disease. It may be taken in four grain doses, at first, every two or three hours.

Hoffman's anodyne in one teaspoonful doses, every hour at first, is a medicine admirably adapted to meet the indications; it relieves pain and acts as a stimulant. Dover's powders, for a strong adult, in doses of ten grains, three or four times a day, if the stomach is not

NOTE. The writer is assured by physicians of large experience in the treatment of the disease that Antifebrin, in 15 grain doses every hour, for two or three hours if required, is one of the very best remedies to control the pain. If none of the above remedies can be obtained, a tablespoonful of paregoric or 25 drops of laudanum may be taken by a strong adult to moderate the intolerable pain. Antikamnia is one of the newest medicines for allaying the pain.

irritable, is an excellent remedy, relieving the pain and producing perspiration, which is desirable.

In the catarrhal form, something in addition is required. For the cough at first, ordinary cough medicines are harmful—they are too irritating. Flaxseed tea, drank in large quantities, is an admirable cough remedy in this disease. If the cough is harsh, dry and urgent, a few Dover's powders may be very much needed to moderate it, or instead, Hoffman's anodyne may be taken for this purpose.

The irritation of the air-passages is best allayed by inhaling medicated steam or vapors. The following mixture should be obtained: comp. tincture of benzoin, glycerine, alcohol, each one ounce; put the mixture into an open-mouthed bottle or inhaler, set it in a dish of hot water, and inhale the vapor several times a day.

The following cough mixture is an excellent one; paregoric 1 oz., syrup wild cherry 1 oz., syrup tolu 3 ozs. Mix. Dose, one teaspoonful every two hours. Carbonate of ammonia combined with licorice and wild cherry is an excellent cough mixture. During convalescence some tonic is beneficial in improving the appetite and restoring the strength. The compound syrup of the hypophosphites, the elixir of iron and gentian and Maltine are admirably adapted to such cases.

By a Philadelphia Physician. The late epidemic of influenza in Philadelphia was characterized by some peculiar features. It did not fall upon the whole popu-

lation at once, but occurred at first in isolated cases. It appeared to spread by contagion. The neuralgic forms were most frequent here; with headaches as the most common varieties. The usual symptoms were presented; great prostration, intense pain, debility of mind and body, low spirits, loss of appetite, etc. Pneumonia was very prevalent. Altogether, I do not believe that the type was as severe as elsewhere. I base this opinion on my own experience largely. Of my twenty-six cases of pneumonia, not one died; a record that shows, either an unusually mild type of the influenza that accompanied, or unusually good fortune in treatment. All these, and most of my other influenza cases, were treated by the Marquis Lanza's pills; two grains each, of quinine and acetanilide, and $\frac{1}{8}$ grain cocaine.

Alcohol I could not use in my cases: it invariably did harm, and when people took it as a preventive it appeared to induce the attack, opening up the system and weakening the powers of resistance. I may add that I am not a temperance fanatic, and that this opinion has been forced upon me by my own observation, contrary to my expectations. A very remarkable feature of the epidemic is this: the history of epidemics in general, is that after they have passed by, the health of the community is exceptionally good; so that the mortality rate decreases below the normal; and at the end of two years it is found that no more deaths have occurred than for the two preceding years. This is held to show that those who die of epidemics are the

diseased individuals, with kidney, heart, lung or liver complaints, who would have died any how within the year. This influenza epidemic has not been followed by the usual improvements in the general health. On the contrary, it has left behind it an increased susceptibility to all sorts of catarrhal affections, and a lessened capacity for resisting noxious influences. Never before have I had as many transient epidemics of colds, &c., to treat, and never have I had as much difficulty in getting rid of them. More than once I have been tempted to believe that the influenza itself had returned, so like influenza was the state of affairs. The large number of deaths from diseases characterized by debility, and from heart-failure, shows how persistent is the evil worked by the epidemic.

What is the best way to remove the effects of the influenza and restore the individual to his or her normal health? This question can only be answered by the study of the principles of hygiene, and their application to particular cases. Cold salt-bathing, brisk open-air exercise, regular habits of eating, drinking, sleeping, the avoidance of taking cold, and all unnecessary use of alcohol and other indulgencies, are the best general directions. Sea-bathing suits many cases; mountain air others; but change of air improves the condition of all.

INDIGESTION. DYSPEPSIA.

Indigestion in its various forms is one of the most common ailments for which physicians are called upon to prescribe, and for which patent medicine is taken in great abundance. The ill health which arises from it is often ascribed to some serious organic disease, which does not in reality exist.

As an extensive treatise upon the subject cannot be written out in this limited space, it may be useful to call attention to a group of symptoms, and to some conditions of ill-health which are dependent upon indigestion. Perhaps only one or two, perhaps many of these symptoms may be complained of in a given case.

1. The tongue is usually furred in cases of indigestion ; it may be white and creamy, yellow or darker in color ; sometimes the tongue is red and raw-looking. Foul breath is a sign of indigestion when not due to other causes. A disagreeable taste in the mouth in the morning is common.

2. The appetite may be very poor, capricious, or entirely wanting ; on the other hand, it may be unnaturally good, or even ravenous, the patient eating with great relish.

3. In perfect health we are unconscious of the process of digestion. As a renowned poet once said "he never was conscious that he had a stomach till he became dyspeptic, when he was too frequently aware of it." If the functions of the stomach are much disturbed, there is a feeling of discomfort after eating or faintness.

4. Constipation of the bowels, or in other cases looseness, is not an uncommon sequence of poor digestion. It may depend upon intestinal indigestion. In health the digestion of food is finished in the intestinal canal.

5. Flatulence is a collection of wind or gas in the stomach or bowels, arising from the fermentation of food; it produces a bloated and uncomfortable feeling; eructations of gas from the stomach are very common.

6. Vomiting is present in some cases; sometimes the vomited matter is nothing but a slimy mucus. The food may be vomited soon after eating, or there may be morning vomiting of mucus.

7. Pain in the stomach from indigestion is felt in all grades of severity, from severe cramp-like or griping (mostly in acute indigestion), to the gnawing, burning sensation which is more common in chronic dyspepsia. Pain comes on immediately after eating, or in some instances, only when the stomach is empty, and is sometimes relieved by eating.

8. Heartburn (Cardialgia) occurs usually after eating fatty foods, such as sausages, mince-pies, rich gravies, etc. It is a hot, burning or scalding sensation in the stomach, frequently attended with the eructation of a fluid so acid that it "sets the teeth on edge." It is caused by an acid fermentation of the food.

9. The loss of flesh and strength, when this is not manifestly owing to some organic disease, may be attributed to imperfect digestion and assimilation of food.

There are other phenomena which indirectly arise from indigestion, that are numerous and interesting, affecting distant organs or parts of the body through the nervous system. These effects, though well known to physicians, are little understood by the average person. We notice some of the most common.

1. A sense of languor or heaviness, and disinclination to exertion, especially after meals; pains in the back and limbs, of a dull, aching kind, sometimes a numbness; gloomy thoughts, low spirits, morbid fears, anxiety and irritability of temper are common.

2. A dull headache, or instead a feeling of tension and pressure in some part of the head. Vertigo (dizzi-

ness) is not infrequent, and it generally leads the patient to think that some serious disease of the brain is impending.

3. Palpitation of the heart, irregular pulse, and more or less pain in the region of the heart, are not uncommon, and are phenomena which alarm the patient. These disturbances are produced through an irritation of the pneumogastric nerve, which is connected with the stomach, lungs and heart.

4. A physician of the highest authority in the *Boston Medical and Surgical Journal*, says that nervous prostration or exhaustion, with its long train of nervous symptoms and troubles, may take its origin in chronic indigestion, the disturbances being reflex or sympathetic.

5. Insomnia, sleeplessness, sometimes in extreme degrees, is a very common result of indigestion. When,

NOTE. Eugene Field, "the sweet singer of Chicago," who has suffered from nervous dyspepsia, expresses his views on the "Pneumogastric Nerve" in these lines:

Upon an average, twice a week,
 When anguish clouds my brow,
 My good physician friend I seek
 To know 'what ails me now.'
 He taps me on the back and chest
 And scans my tongue for bile,
 And lays an ear against my vest
 And listens there awhile.
 Then he is ready to admit
 That all he can observe
 Is something wrong inside, to wit:
 My pneumogastric nerve!
 * * * * *

This subtle, envious nerve appears
 To be a patient foe—
 It waited nearly forty years
 Its chance to lay me low;
 Then like some withering blast of hell
 It struck this guileless bard,
 And in that evil hour I fell
 Prodigious far and hard.
 Alas! what things I dearly love—
 Pies, puddings and preserves—
 Are sure to rouse the vengeance of
 All pneumogastric nerves!"

after hours of restlessness, sleep is at last attained, it is disturbed by frightful dreams and nightmares. Difficulty in breathing and sighing are sometimes present. Specks may float in the field of vision.

6. The secretion of the kidneys may be changed in quantity and color; sometimes a large amount of almost colorless urine is passed, in other cases the water is scanty, high colored, and cloudy after cooling, depositing brick dust sediment.

7. Skin diseases, (humors) often appear as the result of derangements of the stomach, such humors as eczema nettle rash, etc.

8. Convulsions in children are most frequently produced by the presence of undigested or indigestible food in the stomach or in the alimentary canal.

9. Hypochondriasis is a peculiar mental disease in which there is great depression of spirits, and a morbid anxiety about the health. It is nearly always connected with obstinate indigestion, often of the intestinal variety.

A form of indigestion, not infrequent, is technically called atonic dyspepsia. It is incidental to a constitutional weakness or atony; the stomach is weak in common with all the organs of the body, consequently, digestion is weak and imperfect; it is the kind of dyspepsia attending all cases of debility and wasting disease; it is also commonly the indigestion from which feeble and aged persons suffer.

NOTE. Charles Dickens, in his Christmas Carol, makes old Scrooge to possess some knowledge of the effects of indigestion, when he doubted the presence of Marley, his dead partner's ghost, in his room. The ghost asked Scrooge why he doubted his senses. 'Because,' said Scrooge, 'a little thing affects them. A slight disorder of the stomach makes them cheats. You may be an undigested bit of beef, a blot of mustard, a crumb of cheese, a fragment of underdone potato. There's more of gravy than grave about you, whatever you may be.'

The leading characteristics of this form are: slight degrees of gastric pain and uneasiness, simple deficiency of appetite and absence of thirst and fever, a pale, broad and flabby tongue.

There is a disease of the stomach in which the gastric membrane is slightly inflamed; the affection is then called gastric catarrh. Chronic constipation of the bowels is sometimes a cause of indigestion, but oftener a result of it. Besides these briefly described forms of indigestion there are others. The disease is protean in form; it will therefore be impracticable to give anything like full directions for treatment. A physician should be consulted who will, after careful examination of the particular case, prescribe such treatment as is adapted to it. We offer a few suggestions which may, possibly, lead to more intelligent treatment than to take patent medicines which are poorly suited to cases of indigestion.

Over-eating, eating too hastily or at irregular intervals, or eating food which is too rich or hard to digest, the intemperate use of tobacco, alcoholic drinks, strong tea and coffee are among the common causes of indigestion. Avoiding the cause is the best treatment. Many persons who lead in-door and sedentary lives get dyspeptic; out-door life and exercise bring about wonderful cures in such cases. In the way of eating, the whole story may be briefly told thus:

Eat the kinds of food which agree with you, at regular intervals, and in moderate quantities. Every person

ought to know by experience what kinds of food "sit the best on his stomach." What is one's meat is another's poison, is true regarding dyspeptics.

As a general rule, starchy and fatty foods and sugar, do not agree with dyspeptics.

In the common and less severe forms of chronic indigestion, a class of medicines called by physicians the simple bitters are very beneficial. They are by name: columbo, gentian, quassia, golden seal, gold thread, etc. In prescribing, they are often combined with other remedies, such as alkalies, acids, aromatics, rhubarb, senna, ginger, etc. They are indicated where the appetite is poor and the digestion slow from gastric debility.

These remedies combined in various ways form the basis of the majority of prescriptions given by many physicians in cases of chronic dyspepsia. In inflammatory and acute affections of the stomach, they are contradicted. If constipation exists, it should be cured. See subsequent articles on the subject.

If there is pain, nausea and looseness of the bowels after eating, take tincture columbo 6 ounces, paregoric, 2 ounces. mix; dose, one teaspoonful in a little sweetened water before meals.

If there is a tendency to the formation of gas in the bowels take columbo half an ounce, ginger half an ounce, senna one dram, add to a pint of boiling water; dose, a wineglassful before meals.

When the appetite is poor and digestion is slow, take the following:

Comp. tincture gentian, tincture columbo each 2 ounces, tincture rhubarb, tincture golden seal each 1 ounce, the syrup of ginger to make $\frac{1}{2}$ pint; dose, two teaspoonfuls just before meals.

A French physician of note highly recommends the following in flatulent dyspepsia:

R

Bismuth subnitrat, magnesia, of each 30 grains, belladonna pulv., zingiberis pulv., of each 2 grains. Divide into 10 powders. Dose, one twice daily, in peppermint water.

An excellent remedy, kept by nearly all druggists, is sold under the name of the comp. bismuth powder. If after eating there is a heavy, full or pressed feeling in the stomach, and a sense of discomfort, one-half teaspoonful or more, taken in a little water, has a remarkably good effect. If the supper has been a little too rich a few doses of this mixture will be found very beneficial.

Some of the prescriptions containing the simple biters, such as quassia and columbo, with a little ginger added, are exactly suited to the indigestion of the feeble and aged, and to those convalescing from acute diseases. In a certain class of cases the mineral acids are needed. A form of indigestion in which there are eructations of offensive gas, painful digestion, a sallow skin and depression of spirits, is best relieved by taking dilute nitromuriatic acid in doses of 12 to 15 drops in $\frac{1}{2}$ cupful of sugared water just before meals.

In some forms of indigestion, pepsin, pancreatin, ingluvin may be beneficial. From personal experience the writer can say that Maltine has a remarkably curative effect in some cases when other remedies fail. For the atonic indigestion of the aged, light alcoholic drinks in very moderate quantity undoubtedly aid digestion.

Acute Indigestion, (A Fit of Indigestion, Bilious Attack, Embarras Gastrique of the French.) Attacks of acute indigestion are very common at all ages. The causes are various. Eating when the stomach is not in condition to digest food, eating food which is difficult of digestion and food in too large quantity, eating stale meats or fish and other poisonous or irritating substances are among the common causes.

The symptoms vary greatly in severity in different cases. Loss of appetite, a coated tongue, possibly slight nausea and vomiting, a little distress at the stomach, slight headache and indisposition for a day or two, may be all the evidence that there is a temporary disturbance of the digestive function.

But generally there is a much greater disturbance. There is at first a feeling of uneasiness, pressure or distress at the stomach, and a sensation of great weakness and general discomfort, disgust for food; nausea, vomiting and pain may soon follow; a sensation of faintness and sometimes chilliness are complained of; the tongue is coated and the breath may be foul; frontal headache is nearly always present and is often very

severe, so that the attack not uncommonly gets the name of sick headache; distress in the stomach is of different degrees of severity, it may be severe and cramp-like. If the undigested food is not vomited, it passes into the intestines and may cause diarrhœa, griping and colicky pains. Not uncommonly there is depression of spirits, a feeling of weight and pressure about the heart, a weak pulse, cold extremities and cold perspiration.

If the patient complains of a bitter taste in the mouth, if much bile is vomited, and if the tongue remains coated with a yellowish fur, and the loss of appetite continues two or three days, the sickness gets the name of a "bilious attack." Bilious is an old name which sticks to medical language, but it has lost its original meaning.

It is sometimes difficult to distinguish a case of simple acute indigestion from one of real gastritis, which means an inflammation of the lining membrane of the stomach. In the latter case, there is vomiting, thirst, distress and fever. The patient may not be able to retain anything on his stomach, not even cold water. If an attack of this kind continues severely a week or more, it gets the

NOTE. Occasionally the circulatory and nervous systems are greatly disturbed; palpitation of the heart, difficulty of breathing, dizziness, faintness, and in some persons confusion of mind, and a condition simulating congestive apoplexy are present, while in young children convulsions may occur.

The writer saw a few days ago a patient, 65 years of age suffering from acute indigestion brought on by an error in diet. Very severe headache, delirium, pain and distressing vomiting were the prominent symptoms.

name "gastric fever." Hard drinkers are subject to attacks of real gastritis. In cases of irritant poisoning, gastritis with its attendant symptoms nearly always results. Such may be the case after eating decaying meats, fish, or other poisonous food.

Treatment. Should the symptoms of acute indigestion come on after eating, and there is good reason to believe that undigested food is in the stomach, the sooner it is thrown out by the act of vomiting the better.

Nature is wise in such cases, and often spontaneous and free vomiting is set up, which removes the offending substances from the stomach. If vomiting does not take place, it is well to encourage it by taking copious drinks of tepid water, with a little ipecac or mustard added. Undigested food may remain in the stomach a long time, causing pain and trouble, if not removed by vomiting.

Unless it is clearly made out that undigested food or other irritating substances are in the stomach, emetics should not be given; they would be harmful. Some disordered condition of the stomach itself, not dependent upon anything taken into it, may give rise to nearly the same symptoms. Such is the case in so-called bilious attacks, in acute gastritis, and in many cases in which the cause of the acute affection cannot be clearly made out. Many of the symptoms above described, as belonging to acute indigestion, are always present. The treatment under these conditions must be different. A mustard draught over the pit of the stom-

ach is sometimes beneficial, and if the bowels are constipated, injections of warm water and glycerine may be used, or a Seidlitz powder may be advantageously taken.

In nearly all acute gastric affections absolute physiological rest of the stomach is an important part of the treatment. When food is taken it should be in liquid form, such as milk gruel, or a little milk and lime water. In these attacks the digestive power of the stomach is gone; if the patient eats, it increases his distress and prolongs the trouble. In the acute indigestion due to an error in diet, even if the sickness seems severe, convalescence is usually established in a day or two, even without medicine, and with abstinence from food.

CONSTIPATION.

Constipation is the result of numerous causes, and some of these are as diverse as they are numerous. The most prolific is perhaps from personal habit, not attending promptly and regularly to the calls of nature. The human family are so constituted that they require different kinds of food. Those people who live upon a simple diet, or a diet which has but little change, are most subject to constipation. Another cause is that of drinking too little water. Certain kinds of food are also conducive to this condition. Loss of power of the muscular tissues of the bowels may be a cause.

The consequences of habitual constipation are numerous: headache, backache, dragging sensation about the small of the back, indigestion, eructations of gas, palpitation of the heart, depression of spirits, ennui, mental worry, and particularly, inability to do well mental work of any kind.

The treatment of constipation depends much upon the existing cause: first learn why the constipation exists. The practice of obeying the calls of nature promptly has cured many individuals. Every person ought to have at least one stool a day, and the most natural time is very soon after the breakfast meal. Many cases will be cured, and a great many more will be prevented, by observing this period with strict regularity.

Suppositories are now-a-days popular. A convenient, simple and effective suppositor may be made of glycer-

ine or castile soap; it should be about two inches long, as large as the finger, pointed at one end or cone-shaped, and passed into the rectum.

A very fashionable remedy at the present time is the glycerine suppositor, found in every well-equipped apothecary shop. Those made by Park, Davis & Co. are very convenient and efficient, one of which may be used, every day if need be, in the morning after breakfasting.

Another way of using glycerine, which is quite effective, is to saturate a piece of cotton wool the size of an acorn with pure glycerine and insert it into the rectum; in a short time a copious evacuation is effected. The injection of glycerine, about two teaspoonfuls in a little warm water, is useful.

Having considered thus briefly the local remedies, it will now be proper to mention some which are used by the stomach. The fashionable one at the present, and very efficient, is the elixir of cascara segrada, which I prefer prepared in the following manner of which a teaspoonful or more can be taken on retiring:—

Fluid extract cascara segrada 4 ounces, elixir of licorice 4 ounces, compound elixir of dandelion, 8 ounces.

These are to be mixed and let stand a few days, and after filtering are ready for use. Dose, 2 teaspoonfuls twice a day, increasing the dose as needed.

Many people find a glass of plain soda from the common soda fountain a very efficient drink for constipation. The Apollinaris water, which in the cities can be

obtained at many grocers and at all apothecaries, is a very useful drink. One of the best pills for family use is sold under the name of Barker's Pills, the formula of which was suggested by the late eminent Dr. Fordyce Barker, a distinguished practitioner of New York, who was a native of Wilton, Maine. The formula is as follows:

Ext. colocynthe 1 scruple, ext. hyoseyamus 15 grs., powdered aloes 10 grs., ext. nux vomica 5 grs., podophyllin, powdered ipecacuanha each 1 gr.

Mix and divide into twelve pills. One or two, at most, of these pills are a sufficient quantity for an adult, to produce a pleasant, painless movement.

Very many other remedies could be mentioned in this article, like sulphur, rhubarb, senna, the fresh unfermented juice of the common apple, the bark of the poplar tree taken from the root, all of which are efficient and well known.

The Massachusetts General Hospital has these directions in regard to keeping the bowels regular, printed for the use of patients:

1. Have a certain time at which to go to the water-closet every day; and go at that hour, even if there is no inclination to do so. Do not strain, and do not be in a hurry.

2. Take water before breakfast and between meals, a glass at a time, either hot or cold, as desired.

3. Eat laxative foods, such as porridge, gruel, stewed prunes, baked or boiled apples, any fruits that sit well on the stomach, brown bread, graham bread, and green-colored vegetables.

4. Exercise helps to keep the bowels regular. Also, rubbing the bowels.

5. Take the laxative daily, just enough to give one movement of the bowels each day. Be careful to take as little of the medicine as will answer this purpose, and gradually reduce the dose.

Diarrhœa. In this article we speak of diarrhœa when it constitutes the entire ailment, or at least, the most prominent symptom. It is one of the symptoms in a great many different diseases, but it is not in such cases the disease itself.

There are, of course, different causes for the acute and transient forms of diarrhœa; among the most common causes are unsuitable food, too much food, undigested food passed into the intestines, intestinal indigestion, foul secretions, intestinal inflammation, impure drinking water, summer heat and chilling the surface of the body.

Of these causes probably the most common is unsuitable food or drink, either as to quality or quantity. Diarrhœa is common in the hot months, and is owing to some putrefactive changes in food, or to the peculiar influence of heat.

There is a form of diarrhœa in which the stools are scanty and slimy; in such cases, the mucous membrane of the rectum or that of the colon is inflamed. Cholera morbus is an aggravated kind of diarrhœa, occurring in hot weather, with such symptoms as urgent vomiting, profuse watery discharges, great pain and thirst.

Some of the causes of diarrhœa are slight, accidental and transient; the discharges they induce are curative in their results. A diarrhœa from irritating food tends to cure itself, and instead of being suppressed, it should

NOTE. Diarrhœa is one of the most frequent and important diseases of children; it will be fully treated under the heading, Diseases of Children.

be encouraged by mild cathartics. Unhealthy secretions and irritating materials developed in the system are often eliminated by free intestinal discharges which it would be very unwise to check hastily.

Treatment. If the diarrhœa is evidently due to improper food or to an improper quantity, a mild cathartic may be the proper thing to take; it clears the intestinal tube of irritating materials and tends to cure. A Seidlitz powder or a drink of the citrate of magnesia is well adapted to such cases.

The colicky pains which often attend the trouble are well controlled by a few teaspoonfuls of paregoric. But in spite of this treatment, and the efforts of Nature to cure the diarrhœa by removing the cause, it may continue for a week or two, or even much longer, especially in hot weather, and when the trouble arises from some unhealthy condition of the intestines not directly dependent upon anything taken into the stomach. In such cases some remedy, combined with great care about the diet, may be absolutely required to prevent the exhausting and continued discharges. In the latter cases the following mixture taken for a few days sometimes effects a cure: paregoric 1 ounce, sweet tincture of rhubarb 2 ounces, tincture of blackberry root 1 ounce, syrup of ginger 1 ounce. Mix, and take 2 teaspoonfuls every 3 hours as needed. In mild cases paregoric, two or three teaspoonfuls for a dose, is sufficient to check the diarrhœa.

Dr. Loomis, a celebrated physician, prescribes this

mixture in cases of diarrhœa which tend to continue too long:

Laudanum $\frac{1}{2}$ ounce, tincture of rhubarb $\frac{1}{2}$ ounce, compound tincture of catechu 1 ounce, oil of sassafras 20 drops, tincture of lavender compound to make 4 ounces. Mix. Dose, one teaspoonful every 4 hours, for an adult.

Acute Dysentery (Bloody Flux). An attack of dysentery may begin suddenly and abruptly with the characteristic slimy and bloody discharges, but generally it begins as an ordinary diarrhœa. More or less of the fever symptoms are present, such as chills, thirst, headache, etc. The distinguishing signs of true dysentery are the small, frequent, slimy and bloody discharges, abdominal pain, and a painful, straining sensation, called *tenesmus*.

A sense of pressure or fulness, as of a foreign body in the rectum, is nearly always felt. In dysentery there is an inflammation of the rectum and the colon just above it. The disease, if mild or catarrhal, tends towards recovery in two or three days; in more severe cases the trouble continues from one to three weeks. As a rule, the affection terminates favorably to life, exceptionally, it does not. In some instances it is an epidemic disease. Attacks of dysentery mostly occur in August and September. .

Treatment. At first a mild cathartic should be taken in order to clear the bowels; castor oil or one or two

Seidlitz powders do well. It is excellent treatment to throw into the rectum a syringeful of boiled starch to which 30 drops of laudanum have been added, if the patient is a strong adult. This should be retained, if it is not, another syringeful may be used. If much pain and frequent discharges continue, the injections may be given every two or three hours till relief is obtained. It is advised by high authorities to use frequent injections of water as hot as can be borne, by means of a fountain or other syringe, for the purpose of rinsing out the rectum, and thus allaying irritation and pain. The patient's chances are much better if he remains quietly in bed till he is convalescent.

Hæmorrhage from the Lungs, (Hæmoptysis).

This is alarming to every patient, especially if he has never had a previous attack. The bleeding may be caused either by a rupture of a blood vessel, by disease of the heart, and by other lesions, but is most commonly occasioned by some disease of the lungs. It may be said here that the hæmorrhage, even if profuse, is almost never fatal. The blood comes up into the mouth with a little cough, and is expectorated. In hæmorrhage from the stomach, the blood is always vomited, and is thus distinguished from the former.

Treatment. The patient should be assured that there is no immediate danger to life. He should remain in a semi-reclining posture in a cool room.

The most potent, and at the same time convenient

remedy, is the application of cold to the upper and front part of the chest. Cold, by reflex action, astringes the bleeding vessels, and tends to check the hemorrhage. Flannels wrung out of very cold or iced water may be used, or bags of pounded ice may be applied to the chest. The patient should swallow small pieces of ice. At the same time heat should be applied to the extremities in order to draw the blood from the chest. A hot foot-bath is useful. Let the patient eat a teaspoonful of fine salt. Take one-half teaspoonful of the spirits of turpentine every one-half hour for awhile.

Nosebleed (Epistaxis). The mucous or lining membrane of the nose is very vascular, that is, it is richly supplied with a net work of small blood vessels from which bleeding is easily excited. In most cases nose bleed is of small importance; in some cases it is salutary; exceptionally it may be dangerous, or even fatal.

Usually, and fortunately, the bleeding is from the lower part of the nostril. Spontaneous bleeding from the nose is most common in young persons of a delicate constitution. In declining life obstinate nosebleed should be looked upon with some anxiety.

Treatment. See that the patient sits upright, for leaning forward increases the bleeding. Take two towels and wring them out of ice-cold water, wrap one around the neck; after folding the other, apply it to the nose and forehead.

In some cases elevating the arm of the bleeding side

high above the head stops the bleeding at once; it is so simple it should always be tried. If these means do not arrest the bleeding, add to a cup of water one teaspoonful of powdered alum, and either snuff the solution up into the bleeding nostril or inject it up with a small syringe. A small roll of cotton cloth, twisted up so that it is firm, saturated with vinegar and pressed up into the nostril, will generally stop the bleeding.

Another simple remedy is a piece of salt pork or ham, nearly as long as the little finger and about as large, pushed up into the bleeding nostril; it presses upon the bleeding vessels, clots the blood and arrests the hemorrhage.

The writer has in several instances instantly stopped profuse hemorrhage from the nose by seizing the patient's nose with the thumb and finger, and pressing the nostrils together against the bone of the nose; this presses upon the bleeding vessels and clots the blood.

Powdered Matico is one of the best styptics; it can be bought of any druggist; dust it upon a pledget of cotton, and push it up into the nostril as far as the bleeding point.

Take a piece of salt pork large enough to nearly fill the nostril, tie a string around it, and with a little probe or button-hook, push the plug up so far beyond the bleeding part that the blood continues to run out the front of the nose, then draw it down with the string until it covers and presses upon the bleeding point; by this means the blood is clotted and the bleeding stopped.

In a paper read before the Illinois State Medical Society, it was stated that "ordinary chewing gum, rapidly chewed for a few minutes will relieve almost every case of epistaxis."

Asthma is an affection characterized by paroxysms of difficult breathing, recurring at longer or shorter intervals, often in the night. The immediate cause of asthma is a spasmodic contraction of the muscular fibers surrounding the bronchial or breathing tubes producing a narrowing of their caliber.

Two principal varieties are recognized: (1) the dry or spasmodic, (2) the moist or bronchial.

In the former whatever cough there may be is dry; paroxysms of labored breathing come on at any time without obvious causes, at other times from inhaling dust or vapors; it is purely a spasmodic, nervous disease, akin to epilepsy, hysteria, etc.

In the latter, or moist asthma, the attack seems to be induced by bronchitis resulting from a cold, or other causes. But it is said that in the majority of cases of so-called spasmodic asthma, bronchitis in some degree exists,—an important thing only as regards treatment. Some faulty condition of the stomach, through reflex action, is the exciting cause of an attack in some persons. The law which governs the causes of spasmodic asthma is wonderfully capricious; for instance a person subject to the paroxysms while living in one neighborhood may be quite free in another near by. The disease

follows the same caprice as regards the effect of dust and vapors. It may be said here that although paroxysms of asthma are often terribly severe, and the patient seems to himself and to others in imminent danger of dying for want of breath, cases are rare in the extreme in which they prove the immediate cause of death.

Treatment. To prevent a threatened paroxysm or to relieve it when developed, there is no simple remedy so effective as the following: Take of stramonium leaves, 4 ounces, green tea dust 4 ounces, lobelia $1\frac{1}{2}$ ounces mix together and wet up with a saturated solution of saltpetre; dry thoroughly, and keep in a close can or well-stopped bottle. Burn a little of this, and inhale the smoke when suffering.

Pastills, principally composed of stramonium leaves and saltpetre, are sold by druggists. In some instances relief is obtained by drinking a cup of strong coffee. The compound Spirits of Ether in doses of one teaspoonful every half hour for awhile, in some cases, affords marked relief. In those terrible attacks in which it seems that every breath is the last, the inhalation of a little Chloroform relieves as by magic, but it is not safe unless under the observation of a physician. These remedies are simply palliative, but they are precious to the sufferer.

There are medicines which in certain cases are radical cures, that is, permanent benefit, with considerable certainty, follows their use, especially in so called moist

asthma. The Iodide of Potassium, or other preparations containing Iodine, decidedly stand at the head of the list.

We suggest the following mixtures, which it is believed will be found of great value in asthma. One thing should be impressed upon the mind, the remedy needs to be taken, in some cases, for several weeks to insure its best result, not in all cases.

R̄

Iodide potassium 1 ounce, syrup wild cherry 4 ounces, fl. ext. licorice $\frac{1}{2}$ ounce, tincture columbo 4 ounces, elixir calisaya q. s. to make 12 ounces. Mix. Dose, one teaspoonful in a little water after meals.

R̄

Syrup hydriodic acid (Wyeth's) 8 ounces, fl. ext. licorice $\frac{1}{2}$ ounce, water q. s. to make 12 ounces. Mix. Dose, 1 tablespoonful after eating 3 times a day.

R̄

Iodide potassium $1\frac{1}{2}$ drachms, Fowler's solution 1 drachm, compound spts. ether $2\frac{1}{2}$ ounces, tincture belladonna 2 drachms, syrup of orange peel q. s. to make 6 ounces. Mix. Dose, 2 teaspoonfuls in a little water after meals 3 times a day.

If bronchitis co-exists, if cough is urgent and the phlegm tenacious and hard to raise, the following mixture is very beneficial in conjunction with the above remedies:

R̄

Linseed oil 3 ounces, gum arabic $1\frac{1}{2}$ ounces, water 2 ounces, glycerine and simple syrup, each 1 ounce. Make an emulsion and add 1 drachm of the oil of checkerberry. Dose, a tablespoonful 3 times a day.

The following are Hospital Mixtures :

R

Sulphate codeine 8 grs., iodide potassium 64 grs., purified chloroform 150 drops, simple syrup 6 ounces, emulsion of gum arabic q. s. to make 10 ounces. Dissolve and mix. Dose, 1 teaspoonful 3 times a day after meals.

R

Iodide of ammonium 2 drachms, bromide of ammonium 3 drachms, syrup tolu 2 ounces, tincture lobelia 5 ounces. Dissolve and mix. Dose, a teaspoonful in a little water three times a day.

Anæmia (Poor Blood.) So many persons are in the habit of taking patent or other medicines to improve or purify the blood, that it would be well to understand better what symptoms and signs point to the fact that the blood is poor, and needs "doctoring".

The idea that many persons have that they should take medicine to purify the blood is mostly a delusion. In the great majority of cases such patients are suffering either from chronic indigestion, or from anæmia, or both. Many girls and women become anæmic without obvious causes. There is a deficiency of blood, more than an impurity; the deficiency is mostly in the red blood globules. Anæmia also attends as a striking feature in the course of a great number of chronic diseases, such as consumption, cancer, Bright's disease, chronic dyspepsia, malarial poisoning, etc.

NOTE. To get these prescriptions filled, take this book to a druggist and point out to him the one desired.

/ The following are some of the evidences or signs of Anæmia as given by a noted medical writer:

“Anæmic patients have coolness of the surface and especially cold extremities. They are not so able to resist cold as the plethoric [full-blooded]. The action of the heart is feeble; the pulse is small, weak, compressible. The action of the heart is easily disturbed, becoming rapid from slight causes, and frequently irregular. The mental energy is diminished; persons are not adequate to the intellectual efforts of which they are capable in health. The strength of will and determination of purpose are impaired. The muscular strength is diminished. The surface is pallid from the deficiency of the coloring matter contained in the red globules. This pallor is apparent in the face and especially the prolabia [lips]. Mental depression, anxiety respecting health, hypochondriasis, irritable temper, want of buoyancy and energy, a feeling of lassitude, and a painful sense of inertia or indolence exist.”

Besides the above phenomena there may be a craving for some unnatural thing to eat, such as chalk, slate-pencils, charcoal, etc. The appetite and digestion are poor, and constipation as a rule exists. Shortness or deficiency of breath is complained of.

Ill health of this kind is quite common in girls and women, but rare in men; with proper remedies it is generally cured. Overwork, mental or physical, indigestion, or mal-assimilation of food, insufficient amount of good food, the want of sleep and rest, too close confinement in over-heated rooms, or the want of out-door exercise, are among the obvious causes, but there are others more obscure.

No fact in medicine is better established than that

mixtures containing Iron, provided they are well borne on the stomach, are usually of great benefit to these patients, improving the strength, appetite and color. In prescribing, bitter tonics are often combined with the Iron. The Elixir of Iron and Gentian, and that of Iron, Quinine and Strychnine, or the Wine of Iron, are suitable medicines.

Fellows' Compound Syrup of the Hypophosphites is a good tonic in cases of Anæmia. A mixture called the Elixir of Peruvian Bark and Protoxide of Iron is an excellent remedy.

The various Sarsaparilla mixtures are extensively advertised and used to improve and "purify" the blood. In the opinion of the writer they are very poorly suited to cases of Anæmia.

Another thing in the treatment is of the first importance: the appetite and the digestive powers, if poor as they usually are, should be improved. Good blood is made from good food, well digested and assimilated, not from medicine alone. Out-door life and moderate exercise, if the habits are sedentary, a change of residence and a change of food, freedom from domestic cares, are sometimes essential to a cure. If the appetite is poor, and if Iron is not well borne, some mixture containing one or more of the simple bitters is at first an admirable medicine. Constipation almost always exists in cases of Anæmia. As an important item in treatment it should be remedied. For some excellent directions for the cure of constipation read the article on page 281.

Jaundice, which means a yellowish tinge of the skin and white of the eyes, is a noticeable symptom of diseases of the liver, of cancer in its later stages, of some cases of anæmia, etc., but it does occasionally occur as an individual, transient, functional disease, ending in recovery in about two weeks. In the latter case, the trouble is most commonly caused by a catarrhal inflammation of the bile-ducts, producing obstruction to the normal passage of bile from the gall-bladder to the intestine; the bile accumulates in the gall-bladder, and in some way bile-pigments (the coloring matter) find their way into the blood, giving a yellow tinge to the skin. The obstruction may be complete or incomplete. It is probable that in many cases the inflammation begins in the duodenum (the upper intestine), and extends into the bile-ducts; if so, there are at first, symptoms of stomach and intestinal disorder, such as nausea, loss of appetite, a coated tongue, a feeling of weight about the stomach, possibly vomiting, and either constipation or diarrhœa. These symptoms precede for several days the change of the color of the skin. But there are other causes of inflammation of the bile-passages: exposure to cold and dampness, the passage of a gall-stone through the ducts, obstruction by a gall-stone arrested in its passage. Jaundice is not uncommon after an attack of gall-stone colic. In all, or nearly all, cases of Jaundice the bile-pigments may be first noticed in the urine, that is, the urine has the appearance in color of saffron tea; it stains the linen yellow. The sweat also contains the

coloring matter and stains the clothing, in some cases.

Another noticeable sign that the bile does not flow from the gall-bladder into the intestinal canal, as is natural, is the appearance of the stools or feces, they are whitish or clay-colored, the bile-pigment is wanting in them, hence the absence of the natural color. Another thing, which is quite peculiar, the pulse is often very slow, 30 to 40, even lower, a symptom which should lead the observer to suspect the nature of the disease. The respirations are diminished in frequency. The mind is apt to be dull and heavy, and the patient inclines to sleep in the day time. There is likely to be itching of the skin, especially at night. Many of these symptoms precede the characteristic yellow tint of the skin.

One writer says that the diagnosis of Jaundice is easy, if the examination of the patient is made in the daytime. It seems to me that he should have added, provided the disease has continued several days, for the skin is normal in color during the first stage of the affection. The first distinctive symptom is the change in color of the urine. Much of the bile is eliminated by the kidneys; the urine becomes yellow, thick and rather scanty. The affection is most frequent in youngish persons. It must be distinguished from the Jaundice dependent upon serious organic diseases of the liver.

Little need be said regarding treatment, as no medicine or means are known which cut short the attack, or control it in any appreciable degree. Good authorities advise that some laxative be taken in sufficient quantity

to keep the bowels loosened. Fatty foods should not be taken, as the presence of bile in the intestinal canal is required to digest them. The patient usually desires some acid drinks. Cider was formerly regarded as beneficial, probably lemonade is equally so. If the Jaundice results from an inflammation, as is generally the case, spontaneous recovery takes place in two or three weeks.

THE CARE OF THE EYES.

BY A SPECIALIST.

Lying down, leaning your head to one side or in any constrained position while reading is a bad thing for the eyes. Reading in a poor light is a great strain. If you cannot see distinctly at a distance, or cannot read with comfort, you need glasses. Get the best quality of lenses; their proper adjustment before the eyes and their quality are the most important considerations. Pebble glass is expensive and scratches too easily. If possible, each eye should be fitted separately with the proper glass, for they are frequently unlike. If smoked glasses give you comfort, get plain glass and not too dark. The curved smoke glasses put in rubber frames are usually too dark and are just as apt to do your eyes harm as good.

More eyes are destroyed by a poultice than from almost any other cause. In any inflammation cold is generally the best application; it is best applied by putting on a cloth dipped in water and laid over the eye, before this gets warm have another cold cloth ready, and so on.

A cinder in the eye may sometimes be removed by holding the lids away from the eye and blowing the nose. If on the upper lid, have the person look down to the floor, then taking hold of the eyelashes pull the lid down and out, and then up over a match pressed on the lid just above. The cinder when seen is best scraped off with a quill tooth-pick. Conjunctivitis is

when the surface of the eyeball looks red and inflamed. There are two kinds most commonly met with: 1st, redness with more or less secretion in the nasal corner; 2d, some redness with pimples or little ulcers where the clear part of the eye joins on to the white part. In this second kind the eyes may be sensitive to light.

Treatment. Don't tie up the eyes, don't poultice, don't put on tea leaves or anything of the sort. Take a dose of salts and avoid rich food of every kind. In addition for No. 1: get some boracic acid, put a teaspoonful in a pint of water and bathe the eyes with the solution three times a day, taking pains to get some in the eyes. Rub vaseline along the edge of the lids at bedtime.

No. 2. Use same wash as in the preceding case; in addition dust a little calomel right on the eyeballs, once a day for 3 or 4 days. Granular lids are best treated by turning them over and touching very lightly with a crystal of sulphate of copper once or twice a week.

All injuries to the eye must be treated by keeping the patient very quiet and using cold applications. When the lids are red, or the person has a number of styes, it shows poor health, and that the eyes are being strained in some way. When the eyes are sensitive or painful, following rheumatism or gout, a physician must be consulted at once.

The Care of the Ear. Never box any one's ears, serious deafness has been known to result. Excessive

cleanliness is a frequent cause of impacted wax. Nature has put the region of the ear-drum where it cannot be easily reached. This is a strong hint to leave it alone and not put in ear probes or try to scrub out the inside with harsh soap.

Earache. A little laudanum dropped in will often relieve. Dry heat is very grateful, heat a napkin over a lamp and apply to the ear, having another heated and ready before the first one cools and so on. Earache may sometimes be relieved by shutting the mouth, holding the nose and trying to blow, then swallowing once or twice. If the throat is sore use a gargle first before blowing in this way.

Eczema. A little reddened spot will itch, then a scab will form with some secretion. The most frequent site is behind the ear or at the opening of the orifice.

Treatment. Avoid pastry, salt meat, tea and coffee; keep the bowels regular. Soften up the scab with vaseline, and dust on a little powdered borax or tannin. Any soothing application that excludes the air is good.

Impacted wax. Symptoms: stuffed up feeling in the head, gradual loss of hearing, or the hearing suddenly regained, then lost again, sensation as if something in the ear moved when the head is turned suddenly. To remove the wax: put half a teaspoonful of baking soda in a pint of hot water. Use a fountain syringe, directing the nozzle at an angle (in and down not straight in). Don't use much force. Afterward dry the ear very carefully.

Discharge from the ear. Use pure hot water in the same manner as above directed. Dip up a very little tannin or borax on a quill tooth pick and blow it into the ear. Too much powder is apt to cake and prevent the proper healing of the ear. Use this treatment every 6, 24 or 48 hours, according to the amount of the discharge.

SLEEPLESSNESS. INSOMNIA.

Cover the embers
And put out the light,
Toil comes with the morning
And rest with the night.

Longfellow.

King Henry IV.—How many thousands of my poorest subjects are at this hour asleep,
Oh, sleep! Oh, gentle sleep!
Nature's soft nurse, how have I frightened thee,
That thou no more wilt weigh my eyelids down,
And steep my senses in forgetfulness.

Shakespeare.

Our remote progenitors, especially those who lived in suburban towns, found little difficulty in obtaining natural and refreshing sleep. Physicians now-a-days hear much complaint among the "enlightened classes" of their inability to sleep well at night. "There is something wrong in Denmark." The want of a proper amount of good sleep brings on mental and physical exhaustion, indigestion and irritability of temper. It is no doubt true that wounds heal quicker and better, and recovery from disease sooner takes place if the patient sleeps at night. What are the causes of sleeplessness?

Among the most common are mental and physical overwork, dyspepsia, over-eating and eating indigestible food for supper, drinking strong tea or coffee, the intemperate use of tobacco, or stimulants, too much care and worry, pain, nervous exhaustion and disease.

Many women of a nervous temperament are not able to sleep after attending an evening party, the mind is too excited to sleep. There should be regular hours for

retiring; bodily and mental comfort ought to be enjoyed for a few hours just before retiring. Some light amusement, or light reading, which will divert the mind from the thought and labor of the day, is very beneficial.

To those who do not labor, a walk or a ride in the evening often acts like a charm. Some persons who are light eaters are benefitted by a little light and easily digested food just before bedtime.

We come to describe the so-called artificial methods of getting to sleep, and they are of considerable importance. The secret of all of them consists in an effort to keep the mind fixed on some monotonous subject, thus preventing it from following out some exciting train of thought.

Many persons say that they cannot get to sleep because they cannot stop thinking. The thoughts should be turned upon such a dull, monotonous and uninteresting subject that the person falls into a drowsy condition, when consciousness will soon be lost in sleep.

The writer of this article, to induce that drowsiness which precedes sleep, follows out in imagination a road leading through an extensive forest, and falls to sleep while making the monotonous journey.

The once famous method of inducing sleep at will, invented by one Mr. Gardner, may be tried. It is said that it never failed in his own case.

The method is this: the person lies on the right side with the head only a little raised; he then takes in several full breaths, and continues to breathe through the

nose with the lips gently closed; he must then fix his mind intently upon the act of breathing and imagine that he sees a constant stream of air passing out from and returning to his nostrils. As soon as the thoughts are centered upon this one idea, consciousness is lost, and the person falls asleep.

Benjamin Franklin advised, if one could not sleep, that he get out of bed, throw the bed clothes off, give them a good shaking, and walk around the chamber till he begins to feel the cold air unpleasant, then return to bed.

For some persons a bath, warm or cold as is most agreeable, just before retiring, has an excellent effect, favoring sleep.

There are some simple medicines, such as valerian, skull-cap, henbane, etc., which are sufficiently narcotic to produce sleep in some cases.

Many elderly persons are much troubled about sleeping. It is certain that some light alcoholic stimulant in moderate quantity, taken at night, favors sleep, but many persons have scruples against its use, even as a medicine for those in the decline of life.

As a sleep promoter in a certain class of cases, one medicine deserves conspicuous mention. We refer to the Bromide of Potassium or Sodium. It has its best effect in the sleeplessness which results from excitement, nervousness, mental overwork, worry and other conditions in which there is too much blood pressure in the brain. It should be taken in much water and in doses

of 20 grains or more, before retiring and may be repeated if required. In case the sleeplessness is owing to indigestion, as it often is, the bromides are of little good. A cup of ginger tea would be a better remedy.

German pharmacists have brought out within a few years several new hypnotics. One of the best of these, perhaps, is Sulphonal; it certainly has a wonderful effect, in some cases, producing continuous and refreshing sleep for six or eight hours. It needs to be given in 15 to 20 grain doses, about two hours before the time for sleep, and if needed, may be repeated.



DISEASES OF THE SKIN,

COMMONLY CALLED HUMORS.

A treatise on common diseases would not be complete without some description of the more common diseases of the skin. Uneducated persons have some queer notions about these humors. If an eruption appears on the skin they are apt to think that the body is full of humors, and that much medicine is needed to purify the blood. As a matter of fact, in many cases, the disease is only skin-deep, resulting from some wrong action of the skin itself, from direct irritation, and from other causes. Another common error is the belief that the eruption can be driven in or out, and that there is sometimes danger in curing the disease on the skin. There is no such a thing as a humor through the system that can be driven out, or driven in. This notion grew out of the "humoral pathology," now exploded. Skin diseases, roughly speaking, barring rare causes, are produced by some wrong action of the skin itself, by irritation, or by disorders of the stomach and intestines, liver, or other organs. There appears to be a sympathetic relation between the external skin and the internal skin—the mucous membrane of the alimentary canal—so that when one is disordered the other inclines to be. For instance, such common skin diseases as Eczema, Acne, Nettle-rash, etc., are often aggravated, if not caused, by disorders of the gastro-intestinal canal. It is well known that the so-called "eruptive fevers," such

as Scarlet fever, Measles, Small-pox, etc., are attended with an eruption upon the skin. These diseases will be described in another place.

Secondary Syphilis is attended with skin-eruptions of various kinds, which are too numerous to be described here.

Some brief definitions of the terms used are needed, in order that the average person may read intelligently the descriptions of skin diseases.

Papules are pimples, or small elevations of the skin, solid, cone-shaped, and generally red.

Pustules are like papules except they contain a little pus or matter.

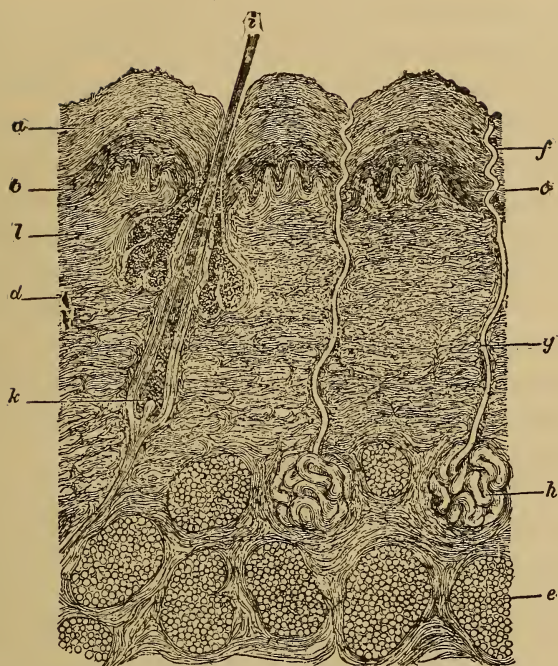
Wheals is a term used to designate elevations of the skin, of various sizes and shapes, mostly seen in Nettle-rash.

Crusts, in common language, are scales, often seen in that common disease, Eczema.

Vesicles are small water-blisters produced by a collection of fluid under the epidermis, or outer layer of the skin. When these Vesicles are of large size they are called *bleds*. Vesicles are common in Eczema and Chicken-pox.

Diseases of the skin are more common in infants and children, because, for one thing, the skin is active and tender, and they are more subject to gastro-intestinal irritations.

The following cut represents the different parts of the skin, with their situations and names.



Section perpendicularly through the healthy Skin.

a, Epidermis, or scarfskin; *b*, Rete mucosum, or rete malpighii; *c*, Papillary layer; *d*, Derma, corium, or true skin; *e*, Panniculus adiposus, or fatty tissue; *f, g, h*, Sweat gland and duct; *i, k*, Hair, with its follicle and papilla; *l*, Sebaceous gland.

Eczema, (Salt Rheum, Moist Tetter.) This is by far the most common and important of the skin diseases, constituting nearly one-half of all cases of skin diseases in children, and a large share of those in adults. The eruption manifests itself in varied forms, is acute and chronic, and attacks persons of all ages. Eczema may be defined as a non-contagious, itching disease of the

skin, characterized at first by an eruption of fine vesicles (water-blisters) which soon break, pouring out upon the surface a moist, sticky substance which, when dried, forms scabs or scales. As the disease progresses, various changes take place. The skin is always swollen and may be cracked, or pustules (festers) and large sores may form. Eczema in infants and children after awhile appears as a raw, moist surface, which tends to dry into scabs in spots which, when washed off, are soon replaced; around the edges of the patches, where the eruption freshly extends, small vesicles may generally be discovered. These are distinguishing marks of this disease.

The eruption commonly begins in a number of scattered, red points which coalesce. As the vesicles run together, large water blisters are formed in the acute variety. In the cases seen by the writer the skin of the face, in the young, was the most common seat of the disease. Indeed the humors so frequently seen on the face of young children are generally eczematous.

On the scalp the skin is swollen and painful; thick, yellowish scabs collect, involving the hairs, and giving off an offensive odor; itching is very troublesome. Eczema attacks the ears and the skin behind them—the ears are swollen, and often cracked, and pour out an abundant secretion. The same form occurs in the bends of the knees and elbows. At the time of nursing it is called “milk crust” or “crusted tetter,” at the time of teething, “tooth-rash”

It is not an uncommon thing for a patch of skin on an adult to remain for years an itching humor; it is almost invariably eczema. Washerwoman's, bricklayer's and grocer's itch are often called "salt rheum"; it is a form of eczema, caused by handling irritating substances; the skin is generally cracked and thickened. In oldish persons, eczema sometimes exists on the lower legs, giving rise to itching, burning and pain, and sometimes to raw, ulcerating sores, of considerable extent.

The chronic form is much more common in adults than the acute.

"In regard to the causes of eczema they are of two kinds; first, the local; second, the general or predisposing. Anything which irritates or inflames the skin can excite eczema in one subject to it; thus we see the eruption appearing again and again in many cases as often as the irritation is repeated. * * * * Poison-ivy may start a real eczema, also arnica, croton oil, poisonous dye-stuffs, as in some colored socks, or the changes of temperature, heat and cold, friction, etc. In infants, irritating diapers, or neglect to change them promptly, is a frequent cause of eczema of the lower parts. And I have reason to believe, on the other hand, that the frequent and careless washings, or irritating soap or towels may frequently give rise to it."

Among the predisposing causes it is said that stomach and bowel disorders, torpor of the liver, rheumatism and debility are the most common.

If some other form of skin disease has continued for a time, and there is much irritation of the skin, eczema is likely to set in as a secondary disease.

Eczema is liable to be mistaken for other skin diseases.

Some points of dissimilarity will be given. These different diseases will be fully described in following articles.

Erysipelas is always attended with much fever and sickness, eczema is not. Erysipelas breaks out at one point only and extends from one point in a smooth, shining, dark-colored swelling; eczema usually breaks out at several points, and the patches are covered with fine water blisters, or scabs, or show a raw surface.

The Itch (Scabies) has a slight resemblance to eczema in the vesicles and the itching, but the vesicles are few in number, usually on the hands, not on the face where eczema is most common in children.

Pruritus, the itching disease without eruption, is sometimes mistaken for eczema. The only visible signs of this affection are the pimples brought out by scratching.

Herpes resembles eczema in the appearance of vesicles, but they are in isolated groups and not, as in eczema, scattered over the skin without regular arrangement.

Lichen is attended with itching, but the eruption is in the form of solid pimples, which remain as pimples, that is, they do not become vesicles or pustules, as they do in eczema, and the skin is not moist or covered with scabs as in eczema.

Treatment. It is, we think, a well-established principle that acute eczema needs soothing treatment, and chronic eczema, stimulating applications. In children frequent washing of acute eczema with soap and water is harmful. A little mild oxide of zinc ointment, or lead



A CASE OF SKIN DISEASE

ointment, may be applied, and covered with oiled-silk, or some scorched linen, to prevent friction or chafing of the skin. Woolen clothing must never be allowed in contact with the diseased skin.

A few days ago the writer treated a case of acute eczema of an adult. The best results were obtained by dusting over the diseased skin with subnitrate of bismuth or with powdered starch.

As an application for chronic eczema one writer says that carbolic acid is worth all the other remedies. An elegant carbolic ointment may be made by mixing 15 grains of carbolic acid with one ounce of vaseline; this may be freely applied to the eczematous skin; it prevents, in a measure, the annoying itching and tends to heal the skin.

Thick scabs sometimes form which need to be removed. This may be done by moistening them with sweet oil, or by putting on a flaxseed poultice.

German physicians are very expert in the treatment of skin diseases. One of their school says that tar is indispensable in the treatment of chronic eczema. The tar ointment may be obtained of any druggist.

The writer has nearly always succeeded in curing eczema of infants and children with the zinc ointment freely applied; it should be fresh or it may be too irritating.

Acne (Pimples, Flesh Worms.) This skin disease is next in frequency to eczema. It consists of an eruption

of hard, distinct pimples, the most of which soon fester or suppurate. It mostly comes out on the face, neck, back and shoulders, and is easily recognized. From one to fifty acne pimples in different stages of development may appear on the face at the same time. It never occurs in young children, and is rare before the twelfth year, common from the fifteenth to the twentieth year. We often see a young person's face covered with red pimples; it is nearly always Acne.

The cause of Acne is an obstruction and an inflammation of the sebaceous or oil-glands of the skin. What are called grubs, or flesh-worms, are simply hardened specks of oily matter retained in the sebaceous glands. The humor mars the appearance of the skin to some extent, otherwise it is insignificant.

Treatment. Perhaps the best thing that can be done in the way of common treatment is to use much care about food. Richly fried meats, fried eggs, oysters and sausages, buckwheat griddle-cakes, mince-pies, salt meats, cheese, hot bread, nuts and raisins, etc., eaten by some young persons are almost sure to bring out a crop of acne pimples on the face. If this is found to be the case, of course all such food must be avoided. Plain food, which agrees with the particular person, must be selected. Remedies which improve the digestion are sometimes needed.

A teaspoonful of sulphur, taken every night for awhile, is sometimes advantageous. The Seltzer aperient taken in the morning is beneficial. There are

some washes and ointments which cure some cases of Acne. Stimulating applications may excite the skin to more healthy action. We suggest a few remedies which are probably as good as any of the many patent lotions and ointments advertised as sure cures; the latter contain, principally, either corrosive sublimate, sulphur, bismuth or lead.

A physician says, in the *Boston Medical and Surgical Journal*, that he has not failed to cure cases of Acne, which come to him, with the following ointment:

Chrysophanic acid three grains to one ounce of vaseline, mix and make an ointment. At night, after the face is well washed with soap and hot water and dried, the skin is well rubbed with the ointment, and this repeated every night until the skin is reddened, when the ointment must be omitted for a few nights. Continue this treatment till the Acne is cured.

A specialist of Philadelphia uses for Acne the following remedies: washing of face night and morning with water as hot as can be borne. This stimulates the absorbent action of the blood-vessels.

Externally, after washing, use the following ointment:

R

Acidi borici 20 grains, olei eucalypti 5 drops, bismuth subnitrat 1 drachm, lanolin 2 drachms, unguenti zinci oxide 1 ounce.

Internally the following:

R

Liq. potassii arsenitis 72 drops, tinct. nucis vomicæ 72 drops, aloes 2 grains, aquæ menthæ pip. 3 ounces. M. Sig.: 1 teaspoonful after meals.

Mix a little sulphur and flour, equal parts, with sufficient vaseline to make a paste; after bathing the skin at night fifteen minutes with hot water and soap, dry and apply the paste; wash off in the morning.

The following, known as Kummerfeld's lotion, has

been used with great success: Precipitated sulphur 4 drachms, powdered camphor 11 grs., powdered tragacanth 20 grs., lime water and rose water each, 3 ounces. Mix. Shake the bottle before using. The wash may be applied three times a day.

In some cases, when the skin is coarse and sluggish, external remedies may be sufficient to cure, but often they must be joined by internal medication. If the patient is debilitated and anæmic, tonics are required, such as Fellows' Compound Syrup of Hypophosphites, or the Elixir of Peruvian Bark and Iron. Dyspepsia is often a cause of Acne, therefore it should be cured, if possible, by proper diet, out-door exercise and appropriate medicines. Constipation frequently co-exists; it should be remedied. For directions as to its cure, read the foregoing article on Constipation. It is true that in some cases the cause of the disease is obscure; in such instances, the general health should be improved with the expectation that the skin will become more active and healthy. By some, the laxative mineral waters, such as the Hunyadi or the Saratoga, are highly recommended as curative.

Psoriasis (Dry Tetter.) "The next most common disease is probably Psoriasis, which comes far behind Eczema and Acne in frequency, forming only about one-fifteenth of the whole number of cases of skin diseases. Psoriasis may affect persons of all ages, but is very uncommon in young children, and seldom develops for the first time in persons over forty years of age. It is characterized by the presence of separate spots or patches of diseased skin, which are of a dull red color, and have on their surface (unless it has been removed) an abundance of white scales, which fall readily. These scales are spoken of medically as micaceous, because they are in layers like mica. It is also spoken of as a furfuraceous eruption, because of the bran-like character of the desquamation, or scaling, which will sometimes fill the bed or clothing with scales.

The separate patches of psoriasis are generally circular, and may be of any size. Sometimes large surfaces may become covered by the union of a number of smaller patches, each one of which has a strong tendency to grow larger in diameter.

Psoriasis has a very decided preference for the outer or extensor surfaces of the joints, as on the elbows and the front of the leg and knee; while eczema affects more commonly the inner or flexor surfaces, as the bends of the elbows and knees. It not infrequently attacks the scalp, and there gives rise to much scaling and is one of the causes of dandruff. The surfaces of Psoriasis are never moist, except when greatly scratched or irritated; while eczema tends to show moist surfaces. Psoriasis rarely itches, whereas eczema seldom fails in this."

Eczema in its later stages, and when limited to smallish patches, may somewhat resemble Psoriasis, especially on the scalp. But Eczema at first is moist, while Psoriasis is not. Psoriasis is generally a chronic disease, like Eczema, if cured for awhile, it is likely to return.

The distinguishing marks of Psoriasis are the dry scales in layers, which may be picked off. In Pityriasis the scales are branny, and not adherent to each other, and easily fall off. For a common remedy tar soap may be used in washing these patches.

Dr. Bulkley, physician to the New York Skin Hospital, says that the oil of cade 25 parts, *sapo viridis* 15 parts, and glycerite of starch, mixed, and well rubbed upon the skin at night, cures Psoriasis. As an internal medicine, arsenic in some form is *the* remedy in that class of skin diseases in which the skin is covered with scaly or branny patches. It should be taken under the direction of a physician.

Nettle-rash (*Urticaria*, The Hives.) This peculiar eruption comes out suddenly without premonitory symptoms, or is preceded by slight sickness. The rash is in the form of blotches, or solid elevations of the skin called wheals, varying in size from one-half of an inch to several inches in length; they are round or oval, in stripes, or in other irregular shapes, whitish or rosy in color, and surrounded by a little redness of the skin. Burning, tingling and prickling sensations are felt, and a strong desire to scratch, which if done, brings out more wheals.

“*Urticaria*, according to the duration of the disease, may be described as acute or chronic. The acute variety is commonly, though by no means invariably, ushered in by slight febrile symptoms, languor, headache, depression, gastric disturbance, furred tongue, etc. The efflorescence appears suddenly, and may involve the whole body or a portion only, accompanied by intense and almost intolerable burning and stinging sensations. In a variable time, from an hour to a day, the symptoms subside, and the eruptions disappear without leaving a trace unless in the form of scratch-marks. The termination of the attack is greatly influenced by the removal of the exciting cause, as well as by active treatment. Relapses may take place. Chronic *urticaria* may continue for months or years, or, indeed, as long as the cause exists. The individual wheals come and go as in the acute form; the lesions, however, are usually smaller. Crop after crop may appear, the skin being hardly ever free from them. The patient's general health may appear fair.

The causes of *urticaria* are numerous, and of a very diverse character. Certain external irritants and poisons to the skin, as the stinging nettle, jelly-fish, caterpillars, fleas, bedbugs and mosquitoes, are not infrequent causes. Among internal causes, gastric and intestinal derangements are by far the most common; they in

fact are the cause of the majority of acute urticarias. An over-loaded stomach, excess in wine, beer, or highly seasoned food may occasion an attack, while certain articles of food, as fish, oysters, clams, crabs, lobsters, pork, especially sausage, oatmeal, mushrooms, raspberries, and strawberries are all apt to bring out the eruption. A number of medicinal substances may also bring on an urticarial eruption in some individuals. In most cases of urticaria from these causes, a certain idiosyncrasy seems to exist. Any irritation of the bowels, as of worms in children, may bring out the eruption. Sudden emotion or unusual excitement in certain persons may also produce it. In females menstrual and uterine difficulties may cause urticaria. The disease is intimately connected with the nervous system, and patients with chronic urticaria are apt to be persons of more or less depraved nervous organization.

The diagnosis of urticaria does not often present any difficulty. The peculiar and evanescent character of the eruption, the excessive burning and tingling, mark it as something different from other skin diseases."

In the way of treatment a few remedies are given.

Menthol dissolved in alcohol makes a good wash, generally relieving the troublesome prickling and itching.

A quart of water, to which a solution of carbolic acid and two ounces of glycerine have been added, makes an excellent wash. If anything has been eaten, which is the probable cause, an emetic should be taken immediately to empty the stomach. A few doses of Epsom salts are often beneficial, taken in sufficient amount to loosen the bowels.

While the cause of Nettle-rash is generally some error in diet, it is not always easy to say just what the

offending food is; on this account, in chronic cases, one kind of food after another must be left off till it is known what particular kind disagrees. It is said that coffee with some persons brings out the rash. I have seen to-day a case of Nettle-rash which has been troublesome for ten days. The patient is suffering from considerable disorder of the stomach and bowels which is, in this case, the cause.

Erythema is an efflorescence, or mild inflammation of the skin, appearing in patches of uniform redness, which disappear momentarily on pressure with the finger; there may or may not be swelling of the skin. In its simple form there is no disturbance of the health, that is, on account of the eruption. Erythema is interesting on account of the fact that it is liable to be mistaken for more serious diseases. The redness caused by a mustard plaster, by a slight burn, by exposure to the hot rays of the sun, by chafing in infants, are examples of simple Erythema.

Several varieties of Erythema are described. (1) The patches of redness may be fleeting, quickly leaving one part to appear on another. (2) It is sometimes in rings or circles, etc., the skin in the center being healthy looking. (3) That form which appears in the folds of the skin, the arm-pits and groins, etc., of infants and fleshy women. (4) Eczema is often preceded and accompanied by an inflammation of the skin which is Erythema. In some forms of Erythema there may be slight burn-

ing, tingling or itching, but often there is none. In infants and children, disturbances of the stomach and bowels, teething, chafing, and irritation of the skin by discharges from the bladder and bowels are the frequent causes.

Erythema slightly resembles erysipelas, and by ignorant or dishonest quacks it is often called by the latter name to make a good case.

In the way of treatment but little is needed. In infants the skin should be kept clean and dry and dusted with prepared chalk or bismuth; in adults the zinc or lead ointment may be applied.

Erysipelas (St. Anthony's Fire.) Much that passes under the name is not Erysipelas at all, but is some other, and milder skin disease, such as Erythema, Eczema, etc. Erysipelas is an acute, constitutional disease attended with fever and an inflammation of the skin. It usually begins abruptly and with chilly sensations, followed by fever, and the usual fever symptoms, such as headache, backache, and aching in the limbs, thirst, excited pulse, etc. In infants nausea and vomiting, and frequently convulsions, precede the rash. The disease is quite common in adults, and occasionally seen in infants, but is rare in youth. There seems to be some poison or unhealthy condition of the body which occasions the outbreak. Erysipelas, in a certain sense, is a contagious disease. The inflammation of the skin usually starts from some wound, sore, or abrasion of the skin. In infants,

the vaccine sore, the navel, or the genital organs are parts frequently attacked. In adults, the face or scalp is by far the most common starting point of the redness.

When in addition to the above named fever symptoms, an inflammation of the skin begins in the form of a dark-red patch, spreading with raised border, attended with more or less burning or prickling pain, and with a shining and swollen appearance of the skin, and a condition which allows it to pit on pressure with the finger, it may be named Erysipelas without much chance for mistake. The characteristic thing about it is, that it spreads from one point, and does not break out in numerous points over the body, that it spreads in a well marked ridge above the healthy skin, is dark-red in color, and is ushered in by much constitutional disturbance. After 24 hours large water blisters may appear on the inflamed skin.

In an adult, previously healthy, when the constitutional symptoms are not very severe, and when the inflammation of the skin is confined to the face and scalp, the disease usually runs its course in one or two weeks and ends in recovery. In aged and feeble persons, especially if the rash appears on the extremities, the attack is likely to terminate fatally. Every case of Erysipelas occurring in infants, which the writer has seen, ended in death. A celebrated French physician says: "The Erysipelas of infants is a fatal disease."

Treatment. If a physician cannot be found the following domestic remedies may be used:

Grated raw potatoes made into the form of a poultice applied every hour; a bread poultice, not too hot, can be used and changed every 3 hours.

A mixture of sweet oil or linseed oil and spirits of turpentine, equal parts, painted over the inflamed skin, is good treatment; cloths wrung out in a weak solution of carbolic acid, alcohol, or vinegar and water, may be applied. Most physicians advise painting the healthy skin around the erysipelatous patch with tincture iodine, to prevent spreading.

Pruritus is the itching skin disease without eruption or other visible signs of disease, excepting the skin after awhile shows more or less pimples and sores caused by scratching. The writer has to-day seen a case of Pruritus, the patient being a woman 75 years of age. The itching is confined to the arms and is very troublesome. Nothing is to be seen except a few pimples after scratching. In some instances of intense itching, visible signs may be discovered which are evident causes—body lice upon the skin or in the clothing.

Pruritus may be local, that is, prolonged itching may be confined to some particular and small part of the body, or to some organ; perhaps this variety is fully as common as that involving larger extent of the skin.

A form of winter-Pruritus is thus described: "It is

NOTE. While engaged in writing this article I have had an office patient who suffered from Pruritus of the local variety. The part was first irritated by an unhealthy discharge, and the scratching has brought out an eruption of Eczema. The application of hot water, followed by the use of this ointment was advised: creasote 1 drachm, vaseline 1 ounce. Mix, and put on night and morning.

commonly observed upon the lower extremities, particularly the insides of the thighs and calves of the legs, although it may occur upon the upper extremities, and may assume almost a universal form. The peculiarity is, that it leaves its victim free during the summer months, only to return promptly with the frosts of autumn, year after year. During the winter a spell of clear, bright, frosty weather will bring on a tormenting attack, which will pass away when the weather becomes warm and moist. The itching comes on when the patient takes off his clothing at night, and seems to be excited by the impact of cold air."

This is an exact description of the disease as it occurs in the writer's own person. After the first cold ride in the autumn the itching begins in the evening and is confined to the legs. The trouble continues through the first part of the winter, entirely disappearing in warmer weather.

In the way of treatment it may be said that Pruritus is an obstinate disease, very difficult to cure. The application of water as hot as can be borne is one of the best means of relief in some cases. Some washes, such as the 10 per cent. solution of carbolic acid, or a solution of Menthol in alcohol and water is followed by good results. The writer has obtained the best results by rubbing over the itching skin with a mixture composed of creasote one part, glycerine three parts. A high authority on skin diseases prescribes the following wash: carbolic acid 3 drachms, glycerine 1 ounce, water 1 pint. Mix.

One writer recommends essence of peppermint when other remedies fail, another advises that the peppermint

be mixed with an equal quantity of glycerine and brushed over the skin.

Phthiriasis is the medical name given when there are lice upon the skin and an eruption which they produce. The body louse is the largest and the easiest destroyed. They are seldom discovered on the skin, but may be found in the folds of the underclothing, especially where it presses on the shoulders and hips. In some cases body-lice occasion prolonged and troublesome itching and the scratching produces large sores. If a correct diagnosis is not made no progress will be made towards a cure. Entire change of underclothing and bed linen, together with warm baths of soap and water, and baking or boiling the clothing so as to destroy the lice and nits, are all that is needed for a cure.

The Itch (Scabies) is caused by the presence on or in the skin of minute animal parasites, the itch mites. These insects are so small that they are only visible to the naked eye when placed on a black background. The female burrows under the epidermis to deposit her eggs; the tract which is thus made is the distinguishing mark of the disease; it resembles an old pin scratch, roughly speaking. By inserting the point of a pin along the burrow the little animal may be removed and examined with a magnifying glass. In Boston it was the practice, when a part was suspected of being the seat of the Itch, to rub the skin over with ink, then wash it, because the ink stains the rough burrow tracts, so that

they can be seen and found, if present. At the head of these tracts little vesicles, or water blisters, are sometimes seen. The most common seat of the disease is the skin between the fingers or toes, the wrists or feet. The face is seldom touched, differing in this respect from eczema, an itching disease, which often attacks the face.

Treatment. The disease is easily cured. In what is called the quick cure the patient is treated thus: at night, just before retiring, he is very thoroughly bathed in warm, soapy water—a good scrubbing should be given; the skin should then be dried, after which the sulphur-ointment must be thoroughly rubbed into the skin; some old night dress may now be put on and the patient put to bed. This treatment may be followed two nights in succession, at the end of which time the itch-insects will be killed.

Ringworms. There are several kinds of eruptions which are called in popular language *ringworms*, or *run rounds*. They are alike only in their circular form. There is no worm about them; the resemblance to a worm is altogether fanciful. Two, or perhaps more, of the varieties are trivial things and soon heal of themselves; the others are more obstinate and require skillful treatment, besides they are contagious.

The most frequent kind is (1) a kind of Herpes, and begins as a circular patch of vivid red skin, around which small, pearly, water blisters or vesicles break out; the redness fades in the center and is covered with dry, branny scales, while the circumference increases. These

rings come out on the face, neck, breast and arms, and run their course in 8 or 10 days.

(2) Another form is called the *rainbow ringworm*, because there are several rings one within another and differing in color, each well studded with pearl-like, small blisters. Both kinds are attended with some degree of pricking, burning and itching. When they come out repeatedly, as they sometimes do in children, it is a sign that the general health needs improving. The other form is due to a parasitic growth upon the skin, technically called *tinea*; it is a contagious disease, akin to barber's itch.

Rose rash (False Measles) is a non-contagious, and mild disease of the skin, most common in children, appearing as rose-colored spots of varying and small size, and irregular shape, scattered over more or less of the surface of the body. A mild fever often attends the rash, and sometimes there is redness of the throat. The rash is bright red at first; it remains on the skin from a few hours to several days. It is often a transient blush in spots, with but little, if any, disturbance of the health, but in many cases fever and lassitude are noticed at the time of the eruption, or just before. The delicacy of the skin in infants predisposes to this affection, and any disturbance, such as teething, or disorders of the stomach and bowels, are sufficient exciting causes.

But little is needed in the way of treatment. If the stomach and bowels are disordered, some laxative, such as castor oil or rhubarb, may be given.

Lichen is an eruption of pimples, commonly red, but may be flesh-color, grouped in patches or isolated, attended with tingling, prickling and itching. As recovery takes place the pimples dry up, leaving a thickening and roughness of the skin.

It is often an acute disease, lasting one or two weeks, but oftener a chronic disease. The front part of the limbs and the back are favorite seats of these itching pimples. The little rashes which appear in the skin of nursing and teething children are often forms of lichen simplex, and are sometimes called "red gum" or "prickly heat." If the eruption is very troublesome the skin should be dusted over with such soothing powders as finely powdered starch or with bismuth (subnitrate.)

Herpes. In the course of a common cold Herpes sometimes breaks out about the mouth and lips, and is then called a "cold sore"; three or four water blisters, from the size of a pin-head to a split pea, appear in a cluster on an inflamed base; there is usually a burning pain or a stinging sensation. In exceptional cases a painful sore of considerable extent is formed.

The same thing sometimes appears in the course of pleurisy, pneumonia and some of the fevers. A typical and plainly marked case of Herpes is seen in Shingles, or Herpes Zoster, a description of which is given on page 105. One of the kinds of so-called "ringworm" is herpetic in its nature. The reddened skin is studded with a crop of vesicles.

Pityriasis. This consists of a chronic inflammation

of the skin in patches, attended with redness and itching. These patches are finally covered with a great quantity of minute, bran-like, white scales or scurf, which are constantly falling off. The disease may attack any part of the body, but is by far the most common on the parts of the skin covered with hair; thus it constitutes the principal form of dandruff. It is occasionally seen on the sides of the chin, around the mouth, and on the forehead of children having a fair and delicate skin. It is a difficult thing to cure the disease; it often continues and occasions a very disagreeable itching of the scalp, and dandruff.

Skin-Cancer (Epithelioma.) A little scaly patch or spot, or something slightly resembling a little wart, is frequently seen on the nose, face or lip, generally giving no trouble unless the scab is picked off often, or irritated with salves or caustics, when it may result in extensive ulceration. An old name for the disease was *noli me tangere*, which means "touch me not"; thus the name intimates that there is danger in meddling with these things. Although this skin disease is often called a cancer, it is hardly a true cancer. The best treatment is to let them alone, as long as they remain stationary, and do not ulcerate; when they do, they should be thoroughly cut out, or burnt out. A cancer of the lip, or a smoker's cancer, is an epithelioma. It should be removed as soon as its nature is known.

Liver Spots, Moth, (Chloasma.) These terms are applied to a disordered action of the pigments or color-

ing matter of the skin, showing themselves principally on the face and neck as smooth, brownish patches of skin, arranged almost exactly alike on both sides of the face. It is doubtful whether the liver has anything to do about causing them. Washes are advertised to cure or remove these spots, but there is nothing that will do it, excepting some caustic, which first destroys the epidermis or outer skin; corrosive sublimate is one of these caustics; it is a poisonous substance. If removed, the spots are likely to return.

Ivy Poisoning. The humor or eruption brought out on the skin by the poison ivy, and its treatment, are described on page 157.

PART V.

Diseases of Infancy and Childhood.

APHORISMS.

The invasion of acute diseases, in infancy and childhood, is often out of proportion in severity to the after course of the disease.

In the very young the invasion of acute diseases is sometimes ushered in with vomiting or convulsions; drowsiness and apathy are common. The fever-heat, and the rapidity of the pulse and respiration, are often so great that they would point to a fatal termination in the adult.

High fever, accompanied by restlessness and convulsions, may disappear within twenty-four hours, leaving no traces of disease. Disease runs its course with a rapidity not seen in the adult; complications follow each other in quick succession.

The reparative power in the young is much greater than in the adult; wounds, broken bones and sores heal quicker. Disease is not apt to become chronic in the young; recovery or death sooner takes place than in the adult. Children respond better to remedies than adults do.

In children from eight to twelve years old, very rapid growth is sometimes attended with lassitude and pains in the joints and limbs, called "growing pains."

The discharge from the bowels of infants is often green from simple causes, such as indigestion, over feeding, the action of cold, etc.

The practice of giving a mild cathartic, as the first thing in the treatment of the diarrhœas of children, is for the purpose of clearing the intestines of irritating acid, or other offending matter, which, if allowed to remain, would keep up the diarrhœa.

Frequent and watery (serous), almost colorless discharges from the bowels, is the most dangerous form of summer diarrhœas.

In early life, a little error in diet, which would be trivial in the adult, may give rise to vomiting, diarrhœa, and to violent convulsions; for instance, changing the cow's milk with which the infant is fed, or changing from one kind of artificial food to another.

Convulsions, night terrors and the symptoms attributed to worms, may frequently be traced to indigestion or an error in diet.

The symptoms which the round intestinal worm give rise to are very much like some of the symptoms of indigestion. The only positive sign of worms is the actual sight of them. Children under two years of age seldom have worms.

The indigestion of the young is usually acid, on which account some alkali is plainly indicated, such as lime water, soda, magnesia, the aromatic spirits of ammonia, etc.

It is probable that in hot weather chemical changes rapidly take place in milk that render it poisonous to infants, and cause many cases of diarrhœa and inflammation of the bowels.

Milk is often tainted and poisoned from exposure to air made foul by gases from decomposing animal matter; on this account infants artificially fed do much better in the country.

Rapid wasting and blanching of the face and lips, with deeply sunken eyes, is a sign of intestinal disorder.

Infants do not need food the first twenty-four hours of their existence, but hundreds have been made sick and died from artificial feeding at this period.

No infant needs castor-oil the first days of its life; if it can nurse, the first secretion from the mother's breast is sufficiently laxative.

The hot weather diarrhœas of infants are often caused by too much milk from the mother's breast, or from the bottle. The infant is thirsty, and nurses for the sake of the drink; the digestive powers are over-taxed, diarrhœa results. Pure cold water should be given for drink.

Grinding the teeth in sleep, itching of the nose and anus, and pallor about the mouth, are evidences of irritation or disorder of the stomach and bowels. The irritation may and may not be caused by worms.

The nervous system of the young is extremely excitable; on this account spasms, fits and convulsions are common. A slight irritation in some part of the body is a sufficient exciting cause for such attacks, in some children.

As a rule, a single convulsion occurring in a child previously healthy has no bad meaning, excluding cases in which it is the initial symptom of some acute disease; and then the after-coming disease may not be severe; but a convulsion occurring in the late stages of disease usually signifies that death is nigh.

Convulsions occurring in the first infancy and continuing through the second, usually become epilepsy.

Convulsions recurring during the course of whooping cough, pneumonia, and in the latter stages of scarlet fever and brain diseases, signify that the case will terminate fatally.

Moderate fever and cough characterize acute bronchitis, the most common disease of the young. An infant with high fever and a cough, whose nostrils dilate

and contract forcibly at each breath, probably has acute pneumonia or severe bronchitis.

In pneumonia, bronchitis and pleurisy, the cough is sometimes painful and suppressed, causing the child to cry just before, or while coughing. Bronchitis in the very young easily runs into lobular pneumonia.

Primary pneumonia seldom occurs in nursing infants; it is usually secondary, following bronchitis, measles, whooping cough, or some fever.

The "expiratory moan," which means a little moaning or grunting sound at each breath, in a sick child, is a sign of pneumonia or pleurisy,

The syrup of ipecac, given early and in sufficient quantities to produce vomiting, is of great benefit in breaking up or mitigating an attack of bronchitis in children.

Spasmodic, or false croup, begins suddenly after the first sleep in the night, and is characterized by difficult and noisy breathing and a loud ringing, crowing cough. An emetic, generally, relieves the patient; but an attack may return the next night.

Spasmodic croup may generally be distinguished from true or membranous croup from this fact: the former begins suddenly and usually decreases rapidly in intensity after the use of an emetic, and sometimes without it; the latter comes on slowly and gets progressively worse in spite of remedies.

Diphtheria begins with feverishness, sore throat, often with vomiting. After the lapse of twelve to thirty-six hours patches of membrane appear in the throat on a deeply red surface, on or near the tonsil; they are whitish or grayish, darker with age, and look very much like pieces of putty stuck upon the throat; they cannot be brushed off easily, and if removed, quickly return.

Small fibrinous masses, liable to be mistaken for true diphtheretic membranes, sometimes collect upon the

throat in common inflammatory diseases of this part; they are soft, cheese-like masses, which can be easily brushed off.

Nasal diphtheria is the most insidious and the most deceptive form of the disease. Its early symptoms are like those of a common cold, attended or soon followed by swelling at the angle of the lower jaw.

Young children are much more susceptible to the contagion of diphtheria than adults are, and they should by all means be kept away from it.

In health the infant's mouth is moist and pale; the tongue smooth and partly covered with a layer of whitish mucus; the gums red and the breath free from odor, except the smell of the mother's milk. From indigestion the mouth becomes hot, dry and red, the breath hot sour and acid.

The skin of the young, being very vascular, delicate and sensitive, is very liable to inflammation and disease; on this account skin diseases, commonly called humors, are very common.

Error in diet, causing indigestion and intestinal irritation is the most common cause of skin disease in children.

Many skin diseases are caused by dirt and uncleanness, and direct irritation of the delicate skin, and not by humors in the blood, as mothers and nurses are apt to think.

Eczema, is the most common skin disease, constituting nearly three-fourths of all cases of diseases of the skin in the young.

Measles begins with catarrhal symptoms, very much like a common cold. The disease is easily known on the fourth day when the characteristic eruption appears, which is in dark colored blotches and a little raised. An earlier symptom is the appearance of the rash on the uvula and roof of the mouth. The danger to life in a

case of measles is from complications, bronchitis, pneumonia, etc.

In chicken pox the skin looks very much as if it had been sprinkled with a little hot water, each drop making a small water blister. This peculiar eruption, and possibly a little languor and slight fever, are about the only symptoms of the disease.

Scarlet Fever often begins abruptly with vomiting, sore throat and high fever; but the peculiar mark which distinguishes it from other fevers is a scarlet rash, which appears on the skin at the end of about twenty-four hours from the beginning of the sickness.

Infants, less than one year old, do not easily take scarlet fever; children from two to seven years are most susceptible to the contagion. After ten years the chances of escape are much greater, and if the disease is contracted, the danger to life is greatly lessened.

German Measles is nearly always a mild disease with an eruption somewhat like that of scarlet fever and usually attended with sore throat.

Whooping-cough until late years ranked third in the fatal diseases of infancy in London, New York and Philadelphia. It is most fatal to children under three years of age and in cold weather.

Contraction of the eyebrows, turning the eyes and face away from the light; disturbance by noises, as if in pain, are signs of headache.

Frequent carrying the hand to the ear and pressing the ear against the mother's breast are signs of earache. Persistent crying of a child, if no other sufficient cause can be found, should always lead one to think of earache as the possible cause. The cry from colic is boisterous and paroxysmal; the legs are drawn up to the body, the face is often purple, the hands and feet cold, the belly distended and hard, and the face shows an expression of real suffering.

It is a wise provision of nature that children do, to some extent, cry; the act of crying expands the lungs, exercises the muscles of the chest, increases the healthy action of the skin, improves digestion, nutrition and the growth of the body; it is a mistake to try to prevent infants from crying at all.

It may be regarded as a favorable sign if a child cries when severely sick, if it is not immoderate: for children in the later and dangerous stages of disease, as a rule, do not cry.

In an infant more than four months old, absence of tears when crying is regarded as an unfavorable sign in a sick child.

Thick matter collecting between the eyelids in a very sick child is a bad sign, mostly noticed in brain and intestinal diseases just before death.

Convulsions occurring in the later stages of severe diseases are usually a sign that death is nigh.

Transient or momentary flushings of the face, ears and forehead, occurring at irregular intervals, in a sick child, is a sign of disease of the brain, if other symptoms confirm the probability.

SORE MOUTH IN CHILDREN. (STOMATITIS).

* This affection has various forms, and is most frequently found in connection with disturbances of the stomach or bowels, or both. Usually the different forms are easily recognized, and are readily controlled by proper remedies. There are three principal varieties: (1) The simple, or catarrhal. 2) The ulcerative. (3) The follicular.

The simple or catarrhal form occurs during the first dentition [teething] and is usually mild, and may be overlooked in the absence of co-existing disease; it occurs in children of feeble constitution, depressed by bad hygienic surroundings, and is a frequent complication of protracted diarrhœa. Infants artificially reared are more liable to it, for there is no artificial food however skillfully prepared, that is so easily assimilated as the mother's milk.

This form is characterized at first by dryness, and more intense redness of the mucous membrane of the mouth than in the normal condition; the gums are sometimes swollen and tender, and later the salivary secretion is much increased, causing the infant to drool to a troublesome degree; there may be but little suffering in mild

NOTE. Many of the ailments most common in infancy and childhood have been described in foregoing parts of this book, such as Convulsions, Spasms, Earache, Toothache, etc. These may be found by referring to the Index. Diseases of the skin (humors), as a class, are most frequent in the young; these diseases have been fully described in preceding parts. See page 307.

cases, but in some instances there is much fretfulness, especially when food is given; the disease is sometimes called nursing sore mouth. Recovery takes place in a short time, unless some other protracted and serious disease exists. In the treatment of this form the child's general health should be looked after and the best of hygienic surroundings should be enforced. One drachm of pulverized borax to one ounce of syrup or gum Arabic emulsion may be applied as a wash; weak solutions of alum are also very beneficial; water to which a few drops of the tincture of golden seal have been added, is also a good remedy; these solutions may be applied with a little swab or brush.

(2) The Ulcerative form begins as a severe simple stomatitis with the additional ulcerous element; the gums are usually primarily invaded, and the inflammation extends along the mucous membrane of the cheeks and lips; wherever it commences it is soon followed by small white points under the mucous membrane, producing small elevations; this is often called white canker. These spots often unite, giving rise to large ulcerative tracts, while others remain isolated; in the folds of the cheek mucous membrane they are more elongated, while inside of the lips they are more nearly circular. This form of stomatitis is usually confined to those parts impinging upon the gums, but sometimes it invades the mouth much more extensively.

The ulcerous, as the simple form, is caused by uncleanliness, poor and scanty food, unhygienic surround-

ings, and acute diseases which debilitate and enfeeble the system, such as lung and bowel troubles, fevers, dysentery, etc.

The symptoms present more severity than the simple form; there is much more fretfulness from pain and soreness, and much more drooling; sometimes the glands under the jaw are swollen, hard and tender; the infant nurses less eagerly than usual, and may even refuse to take nourishment. This form also is often called "canker" in the mouth.

Treatment. Strive to find out the cause and remove it. Change of residence, if unfavorable, change of diet, cleanliness, with an abundance of pure air; if the child is anaemic, which is indicated by pale lips and face, tonics are needed.

In a large proportion of these cases there is a history of chronic intestinal inflammation, which demands special treatment. As an application to the ulcers, carbolic acid in its full strength, carefully applied, is very useful. Chlorate of potash is much employed, given in two or three grain doses, several times daily.

(3) *The Follicular* form is so named from the fact that the ulcers are confined to the follicles of the mucous membrane, or to tissues in close proximity. At first minute, tender red hard papular elevations appear; as the inflammation continues they enlarge and soon look like small water blisters (vesicles); these vesicles are apt to rupture and leave an ulcerated surface. These changes take place during a period of four or five days.

The ulcer which is the result of the eruption is hard and painful, and the base has a grayish appearance; the reparative process now commences, when the ulcer begins to present a more healthy appearance, gradually diminishing in size, and finally healing occurs; their number vary from six or eight to, perhaps, fifteen; they are usually discrete, and about one eighth of an inch across them; the different stages succeed each other rapidly and usually require six or eight days. The seat of the disease is inside the cheeks and lips, and on the tongue and gums, and may occupy the roof of the mouth. The cause is somewhat obscure, but probably is most usually associated with derangement of the digestive organs, and is most frequently seen during the time of teething.

The ulcers are evidently tender and painful; there is usually more or less salivation, and much restlessness of the patient. Diagnosis of the disease is usually easy. It is to be distinguished from the ulcerous form which affects a considerable part of the mouth, while in the follicular form the inflammation is usually confined to the immediate vicinity of the ulcers. In the ulcerous form there is a great variety in form and size of the ulcers, while in the follicular form there is more uniformity in both respects; their small circular form characterizes them. This form usually ends favorably.

Treatment. Follicular Stomatitis when discrete and unattended with constitutional disturbances is usually readily cured with local remedies. Mucilages of gum

Arabic, or flaxseed, can be applied. Mild astringent lotions, such as borax and honey, are effectual and easy to use. If the ulcers are slow to heal and painful, they may properly be penciled with Nitrate of Silver. Tonics and nutritious diet may be indicated.

TEETHING. (DENTITION).

Between the sixth and eighth months the two lower central incisor teeth are cut.

Between the eighth and tenth months, the upper central incisors appear, soon followed by the upper lateral incisors.

An interval of about four months follows in which no new teeth appear.

From the twelfth to the fourteenth month, more teeth are cut and in this order: two upper molars, two lower incisors, two lower molars.

Between the sixteenth and twenty-second months the four canines are cut; between the twentieth month and the end of the year the four back molars. This makes twenty milk teeth. This is called the first dentition. No more teeth are cut till the fifth or sixth year, when the eruption of the permanent teeth begins.

This is the normal order of eruption of the first teeth, but there are many cases in which it is not followed. The upper incisors are often cut first. The lateral or side incisors, sometimes appear before the central. In rarer cases the molars, or possibly the canines precede the incisors.

There is another exception as regards the age at which teething begins; it is often delayed till the tenth or twelfth month, and is especially apt to be in the scrofulous, rickety and feeble; it may be in a healthy

child, and it is not very infrequent either. Some infants have teeth cut through at birth. Formerly it was held, both by medical men and by mothers, that teething is the cause of many ills, such as vomiting, diarrhœa, bronchitis, spasms, convulsions, paralysis, skin diseases, etc.

Many physicians have "gone back on this doctrine." They admit that considerable swelling and pain in the gums, irritability, fretfulness and more or less fever often occur, but deny that serious disorders frequently result from teething.

It is the belief of the writer, that, on account of the extremely excitable nervous system at this age, convulsions, spasms, vomiting and diarrhœa, in some cases, result from difficult teething.

Formerly the gum lancet was much used in cutting the gum over the advancing tooth; it is not so frequently used of late years. One writer curtly says: "Some physicians find more use for the gum lancet than for common sense."

The signs of teething which may be accounted as natural are these: a swollen, hot, red and painful condition of the gums, and drooling; slight feverishness, with flushing of one or both cheeks; irritability of temper, with restlessness at night; carrying the fingers into the mouth, and a desire to bite something. These subside when the tooth cuts through the gum.

Treatment. If protracted diarrhœa comes on during teething, it should be controlled by proper remedies, the same as it should be at any other time. The doctrine

with mothers, that it is not safe to check it, is wrong, and may lead to a fatal mistake by the neglect of timely and appropriate treatment. If the gums are swollen and very painful, dip a small sponge in water as hot as can be borne, press it upon the gum for a while, then bathe the gum with a mixture of equal parts of paregoric and brandy. It is very seldom that any benefit arises from lancing the gum, though we are assured by experienced and sensible physicians, that there are cases in which it affords great relief to the pain.

DISEASES AND DISORDERS OF THE STOMACH AND INTESTINAL CANAL.

There are no diseases more common, important and interesting than those which arise from derangement of the alimentary canal—from those organs which take part in the digestion and assimilation of food. Probably, they form the largest share of the ailments to which infants and children are subject.

Among the varied phenomena which may thus arise, which are directly or indirectly dependent upon derangements of the stomach and bowels in children are these: peevishness, restlessness, feverishness, drowsiness, symptoms of brain disease, symptoms of worms, spasms and convulsions, night terrors, pallor of the face, loss of flesh and strength, skin diseases (humors), canker of the mouth, besides the more common symptoms such as nausea, vomiting, diarrhœa, constipation, flatulence (gas

in the bowels), distress in the stomach, colic, pain in the head, back and limbs and a feeling of languor.

Whenever these symptoms appear, in an infant or young child, an unhealthy condition of the alimentary canal may be looked upon as the probable cause, unless some other known disease exists, as the original and evident cause of the trouble.

Below, some of the principal diseases of the stomach and bowels will be described in detail.

Indigestion. The stomach, in children, is often rebellious, because often abused. Particularly is this true during the first year, in breast-fed as well as in bottle-fed children. The restlessness that marks the beginning is often overlooked, and peevishness is usually the first change that draws the mother's attention.

If she be an observant mother (and let us hope that she is), a furred tongue, and probably a sour-smelling breath will be noticed. Following these symptoms there will be cramps, during which the child will cry and draw up its legs. The bowels may be swollen and tender, accompanied by belching and passing of wind. If the inside of the cheek and lips be examined carefully, grayish-white ulcer-spots may often be seen. The same may appear on the tongue, and are usually accompanied by considerable pain. The treatment of these spots will be spoken of later on.

Possibly the first thing noticed will be vomiting. The little one may throw up all its food, either the same as

it was swallowed, or curdled and sour-smelling. Vomiting, however, is not an indication of indigestion alone. It may occur, in children, at the commencement of any of those diseases which are accompanied by a rash—or in fact, almost any acute disease; yet by careful attention to the instruction given in this book, there will be little difficulty, usually, in deciding.

Let us suppose that after careful watching, there is reason to believe that the stomach is at fault. We should then search for the cause of baby's trouble. If it is breast-fed, then you yourselves, mothers are probably either working too hard, or eating improper food. If it is bottle-fed, then baby's stomach is either over-filled, or his food is not of the right kind. Then there is the nursing-bottle; how often is the doctor called, to find it sour-smelling and unclean. You should wash it after each feeding and place it in cold water until again needed. The nipple should be of the variety that fits over the neck of the bottle, without a connecting tube. The negligence of mothers, in observing even the common laws of neatness relating to the nursing-bottle, has caused the untimely death of many an infant.

Then there is frequent feeding. It is not an uncommon sight, to see a mother crowding the nipple of breast or bottle into the little one's mouth, with the evident intention of drowning its cries with large draughts of milk, every cry being interpreted as a signal for more feeding. This is repeated until the stomach is unable to do its work, and indigestion is the natural outcome.

Every turn that baby makes, or every cry it utters is not an indication of hunger. To be sure it takes the nipple greedily, but this is because of thirst, resulting from the persistent endeavor to quiet it by unnatural means.

Finally, the stomach from sheer exhaustion is unable to perform its work, and the nursing is returned in solid curds. When it arrives at this stage, the common-sense way is, 1st—give the stomach complete rest, and, 2d—relieve the thirst. Usually, it is better to stop all nourishment for a few hours, and to allay the thirst by means of Nature's remedy—water, either boiled and cooled, or barley-water, if accompanied by diarrhœa, and oatmeal-water, if there be constipation. A teaspoonful of either may be given every fifteen (15) minutes. After six or eight hours of rest, commence nourishment; a table-spoonful at first—either of breast or bottle—and increasing gradually at regular intervals, until the proper quantity is allowed.

For older children, care in feeding is also necessary. What the sour nursing-bottle is to baby, pastry and unripe fruit is to them. It is not much wonder that John spends a restless night, if he is sent to bed soon after a hearty meal, with his stomach overcrowded with pie and cake. If there be much distress after such a meal, do not hesitate to produce vomiting. The best way to do this is to give half teaspoonful doses of the syrup of Ipecac every fifteen (15) minutes, until the stomach empties itself. If you are unable to get Ipecac, warm

water and salt, or warm mustard water may answer the purpose, if freely given. For colic pains, anise cordial in doses of from twenty (20) drops to half a teaspoonful in hot water, every half hour, will always be useful, and hot applications over the stomach should also be made. If the pains are not relieved by these measures, Paregoric should be given in a little hot water, one drop being allowed for every two months in a year up to the first year, and five drops added for each succeeding year: for example, to a child three years old, sixteen (16) drops may be given every hour till the colic is relieved.

For the ulcerated mouth, a wash made by dissolving two teaspoonfuls of borax in a half pint of cold water, should be frequently applied to the ulcerated spots. Never mix honey with borax for a mouth-wash.

If these measures be faithfully carried out, and no relief is obtained in a few hours, call your physician by all means.

Indigestion of Older Children. Dr. Meigs, of Philadelphia, gives the following excellent description of this affection, not well understood, perhaps, by all parents:

“Indigestion in children who have completed the first dentition [teething] may, as in the case of infants, be occasional or habitual. Occasional indigestion occurs in strong and vigorous, as well as in more delicate subjects. The attack generally begins within a few hours or a day after the child has eaten some indigestible sub-

stance, with languor and chilliness in older children, and with languor and peevishness in those who are younger; after which there is headache, pain in the stomach in most of the cases, and very often a disposition to somnolence. If the child is attacked with vomiting soon after the appearance of these symptoms, and ejects the offending material, it will often seem perfectly well from that time. If, however, this does not take place, fever, sometimes of a violent character, is almost certain to make its appearance. The pulse becomes very frequent, rising to 120, 130, or even higher, and being full and resisting; the skin becomes flushed, dry, and very hot; the appearance of the tongue is not generally changed early in the attack; there is considerable thirst; the child is restless and uneasy, tossing from side to side, or lies in an uneasy sleep, attended with frequent starting and jerking of the limbs or crying out; the abdomen is natural, or hard and distended over the epigastric region. When the symptoms just described make their appearance suddenly, by which I mean in the course of a few hours, in a child two, three, four or five years old, after it has eaten some indigestible substance, there is reason to fear an attack of convulsions. The probability of the occurrence of this accident is great in proportion to the earliness of the child's age, and the impressibility of its nervous system. The attack is particularly to be apprehended, and should be carefully guarded against, whenever the fever is violent, when there are urgent complaints of headache, when the restlessness and agitation are very great, or when there is somnolence, with frequent startings or twitchings of the muscles. Convulsions sometimes occur without any previous warning, or after such slight signs of disorder as would fail to produce uneasiness in the parents or attendants.

The symptoms produced by occasional indigestion generally continue until nature relieves the stomach by vomiting or diarrhœa, or until the remedies proper in the case, the most important of which are evacuants, have been administered. It happens not unfrequently

that symptoms of gastric or intestinal disorder remain for some days after the violence of the attack has subsided, and in some instances the disturbance is so great as to occasion gastritis, entero-colitis, or dysentery.

Habitual indigestion in children who have completed the first dentition, is not at all an uncommon affection. It is a condition analogous to, if not identical with, the dyspepsia of the adult. The symptoms of this form are the following. The general appearance of the child is delicate, as shown by a pallid or sallow tint of the skin, instead of the ruddy complexion of health, by thinness and want of proper development of the limbs and trunk, and by softness and flaccidity of the muscular tissues. There is an habitual air of languor and listlessness, with absence of the usual gaiety and disposition to play natural to the age, and the child often complains of being tired. The appetite is feeble or uncertain, being sometimes absent and at other times too great; or it is peculiar, the child being willing to eat of dainties, but refusing food of a simple character. The tongue presents nothing peculiar. It is however more frequently somewhat furred than clean and natural. The temper is usually irritable and uncertain. The child rarely sleeps well; on the contrary, the nights are restless and much disturbed, the sleep being broken and interrupted by turning and rolling, by moaning or crying out, and by grinding of the teeth. These latter symptoms, together with the picking at the nose, which is a frequent accompaniment, are almost always referred by the parents and nurses to worms, and it is often impossible to convince them to the contrary, even though frequent and violent doses of vermifuges have failed to show the existence of entozoa [worms.] The state of the bowels is uncertain. In some instances they are very much constipated, requiring frequent doses of laxatives, or careful regulation of the diet, to keep them soluble; in others they are inclined to be loose; in others again, constipation and diarrhœa alternate. The abdomen is usually natural, or somewhat enlarged from flatulent distention; complaints of pain are not uncommon."

Simple Diarrhœa. Of the ailments of early childhood, looseness of the bowels is very common, especially so between the ages of six months and two years. To account for this it may be said that the intestinal glands are in a state of active evolution, and that slight irritation is sufficient to cause diarrhœa. In many cases the diarrhœa is beneficial, as in this way nature removes irritating substances from the intestinal tube, but slight causes make it pass the limit of health. Atmospheric changes have a causative influence, particularly heat and cold. A simple diarrhœa in the hot weather would give a physician, or an intelligent mother, more uneasiness about the result, than it would in the cool months. Exposure to cold may be the cause of diarrhœa in a child, and other causes which would have no effect in the adult, induce diarrhœa in the infant.

Simple diarrhœa sometimes comes on with an attack of vomiting; the contents of the stomach being first thrown up, afterwards greenish colored mucus, then looseness of the bowels follows; this often happens after eating food unsuitable as to quality or quantity. The discharges may be bright yellow or greenish in color; white specks are sometimes seen, which are the casein of undigested milk. More or less pain, flatulence and a feeling of languor may be felt. Diarrhœa of this kind is often transient, and yet it may become quite severe and persistent, or in beginning this way it may run into a severe inflammatory diarrhœa, if it be in the hot months. But the latter is only one of the possible results.

What physicians call severe non-inflammatory diarrhœa may begin suddenly, but more commonly it begins as above described and continues for a longer time and with much severity; the child loses flesh rapidly, the face becomes very pale, and the features greatly changed.

Treatment. The mild and transient diarrhœas of children need nothing in the way of medicine to check the discharges; proper restriction of the diet for a few days, and, possibly, a laxative, is the best treatment; indeed in the severe kinds of "summer complaint" parents and nurses should be shy in giving medicines to stop the discharges, unless they have continued for a long time. Too much food is often given to infants; in some instances the child gets relief by vomiting, in others the excess of food is retained, but is fermented, not digested, and this produces an irritation of the intestinal canal, and consequent diarrhœa. In hot weather the child is thirsty; pure cold water should be given for drink, instead of too much milk from the breast or nursing-bottle. If much pain attends these attacks of diarrhœa, a teaspoonful of the sweet tincture of rhubarb, with a little paregoric, according to the age of the child, may be given with benefit.

Inflammatory Diarrhœa. This is one of the dangerous diarrhœal affections of infancy; it is the great destructive summer epidemic of infants living in large cities, and less commonly attacks infants who are reared in country towns. A brief description of the disease is

given here that mothers and nurses may have some correct understanding of its nature and symptoms, in order that skillful assistance may be timely called.

The disease, which is often a protracted one, may have a mild beginning, and not markedly differ in its general phenomena—in many of its symptoms, from severe diarrhœa, not inflammatory, as above described. The discharges from the bowels may not, at first, be more than four or six a day, and do not much differ in appearance from those of ordinary diarrhœa. After a few days a new symptom appears—the child begins to vomit, and the vomiting continues; the discharges increase in number, at first being yellowish or greenish, afterwards they may be slimy and tinged with a little blood; this signifies that the large intestine (the colon) has become inflamed, in which case the disease is properly called, enterocolitis. In certain cases the discharges look like spinach or chopped vegetables. There is more or less pain in the bowels, and fever. In some instances the stools are watery, but less so than in cholera infantum.

In consequence of the continued diarrhœa and vomiting the little patient becomes greatly changed; his eyes are sunken, his cheeks are hollow, his face is very pale and pinched-looking, and the body is greatly emaciated. The child, at first, may have been fretful and restless, but is now exhausted and remains quiet. In the first stages of the disease the child is feverish; a symptom uncommon in ordinary diarrhœa; another characteristic

symptom is the marked tenderness of the bowels. Such is a brief account of the symptoms of a case of inflammatory diarrhœa. With skillful treatment the patient may recover from this perilous attack, if not he gradually fails and dies from exhaustion, or from dropsy of the brain. or in convulsions.

Infants from six to twelve months of age are most likely to suffer from this affection, but those from twelve to twenty-four months are certainly not exempt; the period during which the first teeth are cutting, is that in which infants are prone to diarrhœas. Whether teething is the common and real cause, is uncertain. There seem, at least, to be other causes, such as improper feeding—probably the most frequent one. Bottle-fed infants are by far the most subject to such attacks. Unhealthy surroundings, in large cities especially, where the air is loaded with poisonous germs, no doubt, induce the disease in the predisposed, for infants do much better, in the hot months, far back in the country where the milk and the air are pure. Heat produces decompositions or such changes in food that it is probably a causative agent in producing diarrhœa, in the infant's sensitive condition. Exposure to cold tends to cause a congestion of the lining membrane of the intestines—the first step towards intestinal inflammation and consequent diarrhœas. Some parents allow infants to eat other things besides their regular foods. The smallest amount of indigestible substances is liable to lead to inflammatory diarrhœa in some infants. Changing the child's

milk or food, if bottle-fed, is a dangerous thing to do in the hot months. Mothers who nurse their infants should be extremely careful of what they eat themselves during this season of the year.

Of course the treatment of this disease, so dangerous to the life of the infant, will be left in the hands of a competent medical man. Prevention is a very important thing, and much can be done by intelligent mothers in this direction by great care in avoiding all the known causes, some of which have been here pointed out.

Cholera Infantum is an infantile disease of the hot summer months, especially of July and August. It occurs most frequently in infants about six months of age. The intense heat of summer and unsuitable food, together with a predisposition in infancy to intestinal derangements, are the evident common causes.

In the majority of cases, cholera infantum begins abruptly, with persistent vomiting and diarrhœa; exceptionally, it begins in a milder way, that is, it may be preceded for a day or two by slight fever, diarrhœa, pain in the bowels and loss of appetite. It is said that in some cases it follows as a sequel to a protracted inflammatory diarrhœa. In whatever way it may begin, the disease when developed is manifested by such well marked symptoms, that it is not easily mistaken for anything else.

The conspicuous and distinctive symptoms are these: the sudden attack; the profuse watery discharges, after



DR. ROBERT KOCH.

Celebrated as an original investigator in the Germ Theory of Diseases, particularly as to the Tubercle Bacillus. The "Lymph," proposed by him as a cure for Tuberculosis of the Lungs (consumption), about which great expectations were at one time entertained, even among Learned Doctors, was a Failure, showing that there are "Sensations" in the Medical World.

the first few—so watery and profuse that they run through the diapers and clothing, leaving nothing but a greenish stain; the urgent vomiting, nausea and irritability of the stomach, so that cold water is often immediately thrown up; the rapid loss of strength, emaciation and change in the appearance of the face, so that in one day even the infant would scarcely be recognized; the eyes are sunken and remain half open, and the face is deathly pale and cool. No diarrhœal disease of infancy, excepting true cholera, brings about such a marked change in the features, and in no other disease, excepting cholera, are the discharges so profuse and watery. The disease runs a rapid course towards death or recovery. Death may occur from exhaustion, or from a dropsical effusion upon the brain or, possibly, improvement may begin on the fourth or fifth day.

Inflammatory Diarrhœa of Older Children.

Though diarrhœa as the result of inflammation is a frequent disease of infancy, as described above, it is uncommon in children from three and one-half years of age upwards. The author has never met with but a few cases, and those were chiefly cases following measles. Intestinal inflammation at this age when it does occur is less extensive than in infancy. The disease may result from sudden exposure to cold when the body is heated and perspiring, and sometimes from eating unripe or stale vegetables. The characteristic symptoms are: pain in the bowels and tenderness, diarrhœa, chilly feelings,

fever, and great loss of strength. At first, usually, the nervous system is profoundly disturbed, as shown by twitchings of the muscles, headache, drowsiness and sometimes by convulsions. If the inflammation is mostly confined to the colon (large intestine), as it sometimes is, the discharges, after the first, are scanty and slimy, and often a little bloody. These symptoms are sufficient to distinguish the attack from an ordinary case of diarrhœa, which is a very common thing in children, and of much less importance. As a measure of precaution and prevention, in most cases beginning with pain and tenderness of the bowels and diarrhœa, it is best to give, at first, some mild laxative, such as castor oil, the sweet tincture of rhubarb, magnesia, etc., for the purpose of clearing the intestines of any irritating substances which may be in them; this treatment is of the first importance if the trouble is the result of an error in eating.

Dysentery, which is an inflammation of the lower part of the colon and the rectum, is not very uncommon in children; its symptoms are much the same as they are in the adult. The beginning is marked by fever, a hot and dry skin, chilly sensations, and diarrhœa, afterwards a frequent, almost constant desire to go to stool, followed by a painful straining sensation; the discharges are peculiar, being scanty, jelly-like masses, mixed with blood; the disease is thus easily recognized.

A laxative should be first given to clear the intestinal canal; afterwards a tablespoonful of thin starch to

which four drops of laudanum is added should be thrown into the rectum by the use of a small syringe; this for a child four years old; the laudanum may be increased by one drop for every year the child is older. The patient must be kept quiet and lying on his back; only the blandest liquid food must be allowed. If the pain and discharges continue the injection may be given three or four times a day. If laudanum is not at hand, frequent injections of warm water may be used.

Constipation in infants and young children is most commonly owing to improper feeding, to imperfect digestion and to pernicious habits—the habit of allowing the bowels to become habitually constipated and then giving large doses of physic. Mothers and nurses do not always know that acute constipation may produce in a young child distress, restlessness, crying and even convulsions, and that there is a much better and quicker cure than to give castor-oil or Castoria. The writer once rode a long distance in the night to see a very sick child, which sickness was entirely caused by simple, but severe acute constipation. By the use of a common syringe several injections of warm soapy water were thrown into the rectum, producing immediate relief; a very simple case which any well-informed mother could have cured. If a dose of castor-oil or rhubarb had been given, the child might have suffered the remainder of the night.

The following is from a lecture on constipation in

children by Dr. Rex, of Jefferson College, Philadelphia: "I usually give a suppository. The so-called health food, or wheat-gluten suppository, not only does good at the time, but also produces a permanent beneficial effect. Sometimes when the gluten suppository fails, I use the glycerine suppository, or, what is still better, a glycerine injection, which liquifies the putrid matter and produces a satisfactory result. In place of these more elegant preparations you may often get quite as good effects from the old-fashioned domestic remedies. A little piece of Castile soap, cut into the form of a suppository, is a favorite nursery remedy. If it be dipped in sweet oil and put into the rectum with two or three rotations, it excites a movement. When necessary, this should be done regularly every morning, so that the child may learn that the morning hour is the time for moving the bowels. * * * * So too you may make a suppository from molasses candy which is often successful. Then, again, you may use liquid injections to overcome constipation in childhood. An ounce of a mild saline is sufficient for an enema [injection]. If all these means fail, what is to be done? In older children I often use senna and fluid extract of rhubarb. Both of these drugs act upon the entire intestinal tract."

WORMS.

Formerly physicians and medical writers gave a greater prominence to worms as a cause of sickness than they do at the present time. This explains why it is that so many mothers believe in worms; the notion has been handed down through "the tradition of the elders." There is sufficient reason for introducing here some description of the signs and symptoms upon which a reasonable suspicion of a case of worms may be founded.

As a rule, children under three years of age do not suffer from worms; they are most common between the ages of three and ten, and in children who are weak and sickly, or poorly fed. It is only in extremely rare cases that worms get into the stomach or into the throat and choke or strangle a child, as mothers think they do. In rare cases they may collect in large numbers in balls or masses of considerable size in the intestines.

The five principal kinds of intestinal worms are the following:—

The Round Worm, the most common kind, resembles the common earth worm; it is round, tapering at both ends, smooth and of a whitish or yellowish color, about six inches to a foot in length, when fully grown; the head is at the smaller extremity, and when examined with a magnifying glass three small horns are seen about the mouth. It inhabits the small intestines, but

may get into the stomach by crawling or during vomiting. Worms may be present in the intestines and not give rise to symptoms, but generally some of the following symptoms occur: colicky pains, bloated abdomen, loss of appetite, or sometimes precarious or craving appetite, offensive breath, nausea and vomiting, diarrhœa, feverishness, and other signs which indicate disturbed digestion; paleness about the nose and mouth, and a dark ring around the eyes, the lower eyelids swollen, grating the teeth in disturbed sleep, waking from sleep suddenly as if in pain or frightened, convulsions or spasms, dilated pupils, drowsiness, headache, picking the nose and itching at the anus. Now, while it is true that worms may be the cause of these symptoms, it is also true that they may arise from simple disorders of the stomach and bowels. There is only one positive sign of worms—the actual sight of them; other signs are not trustworthy. If there is a suspicion of them, some tentative remedies may be given, and the stools examined for the presence of worms in them.

Treatment. Pinkroot is an old remedy for the round worms, and is a good one. If parents are inclined to give any vermifuge without the advice of a physician, it would be much safer and better than many of the worm medicines in the market. It acts better when given in combination with Senna. The fluid extract of Pinkroot and Senna can be bought of any druggist, and may be given in teaspoonful doses three times a day, followed by a dose of castor oil in the morning. The Oil of

Wormseed, in doses of five drops three times a day, to a child five years old, is a safe and efficient remedy.

Santonin, which is the extract of the European Wormseed, is extensively used by physicians in this country and in Europe as a worm destroyer. It is almost tasteless and is therefore easily administered. For a child five years old, the dose is three or four grains three times a day, for two days, and should be followed by a cathartic.

Pin Worm or Thread Worm is the smallest of the intestinal worms, not exceeding one quarter of an inch in length. It looks like a short piece of white thread, hence its name.

It inhabits the large intestine, chiefly the rectum, and very rarely migrates into the small intestine. They frequently exist in immense numbers and give rise to symptoms entirely different from those of the round worm, for these minute creatures when in the rectum cause pain, intense itching, especially at night, and sometimes bloody and slimy stools, with painful straining.

Treatment. Injections of salt and water into the rectum, is one of the best remedies to expel pin worms. Why it does not always cure, is because the treatment is not continued long enough, or because these lively creatures crawl up the bowel beyond the reach of the medicine. Quassia-water is a very effective remedy; add one-half ounce of quassia wood to one-half pint of hot water; after standing in a warm place for a few

hours, strain off the liquid and use as an injection ; it may be repeated if required.

A worm medicine, swallowed, has but little, if any, effect in removing pin worms.

Long Thread Worm. This worm is an inch or two in length, about two-thirds of its anterior part is not thicker than a horse-hair, then abruptly the body swells into a much larger size. This little thing inhabits the upper part of the large intestine, but it is not certainly known that it ever gives rise to any disorder of health, or to any symptoms. It is more of a curiosity, than of practical importance.

The Common Tapeworm. The tapeworm is a flat, jointed worm, generally from five to ten feet long, but may be one hundred, according to some writers. The segments, or joints, look something like small pumpkin-seeds strung together.

As a rule, only one of these exists at a time in the intestines, and it is not so common in children as in adults. Fragments of the worm are passed from time to time, otherwise the worm does not always give rise to any characteristic symptoms. It is sometimes said that a person having a tapeworm has a ravenous appetite ; no doubt such is the case sometimes, but not generally. Faintness, colicky pains, disturbed digestion, nervousness, palpitation of the heart, and emaciation are sometimes noticeable symptoms.

The most trustworthy symptom of a tapeworm is the

passage of fragments of the worm, and this usually occurs, if a worm is in the intestines.

Treatment. We quote from Dr. Bartholow: "Pumpkin-seed is one of the most efficient remedies which we possess against tænia. Two ounces of the fresh seed pounded in a mortar, with a half pint of water, until the husks are loosened and an emulsion is made. The mixture is then strained and the whole amount taken fasting: but Squibbs maintains that all should be taken, husks included. If an action of the bowels does not take place in two hours, the emulsion should be followed by castor-oil. If success is not attained, the dose may be repeated every morning until the parasite is produced.

The Broad Tapeworm is very much like the more common tapeworm, only its joints or segments are much broader; it produces about the same symptoms and requires the same treatment.

ECLAMPSIA. (CONVULSIONS.)

By this term we mean a convulsive condition of the external muscles, which may be partial or general. It is recognized by most writers under three distinct forms or kinds:—

1st. Essential, if there is no lesion of the brain or spinal cord, or in fact no disease of the body.

2d. Symptomatic, if there is disease of the brain or spinal cord.

3d. Sympathetic, if it arises from disease elsewhere.

Eclampsia occurs most frequently in infancy and childhood, but is rare after six or seven years of age, most common between the ages of three months and two years. Convulsions are frequent in certain families, and much more frequent in those of an impressible nervous system.

The exciting causes are very numerous: diseases of the brain, eating indigestible food, changes in the milk with which the nursling is fed, eating unripe fruits, etc. Some children cannot eat bananas, strawberries or oranges, without producing convulsions. In fact, the most frequent cause, in the young, is from disorder of the alimentary canal. Again, eclampsia occurs as one of the initial symptoms of the eruptive fevers,—scarlet fever, measles, small-pox and erysipelas, and is liable to occur in pneumonia, pleurisy, whooping cough, dysentery, cholera infantum, etc. Painful teething, worms,

constipation, burns, injuries, fright and anger, may be the exciting cause of an attack.

Eclampsia may be divided into two stages, first, the prodromal (forerunning) stage, second, the convulsive. In most cases, there is a prodromal stage in which the child is inclined to be more or less drowsy, and if disturbed, fretful; it starts easily at slight sounds; the whole body may be seen to start violently; the eyes have an unnatural look; the child cries fretfully, sighs and, perhaps, drops into a drowsy state again. There may be unnatural heat of head, and if the child is old enough, he complains of headache. The muscles of the face and limbs twitch lightly but rapidly; the thumbs are sometimes involuntarily carried across the palms, the eyes half open, the face pale or flushed. These symptoms continue from a few moments to several hours before the fit, or they may be entirely wanting. When the convulsions are about to begin, the child generally lies quiet, the eyes are open and fixed, and he does not notice or speak. The direction of the eyes is then changed, being, generally, turned up under the upper lids so that only the whites of the eyes are seen.

Immediately before the convulsions, the child may cry out, then suddenly fall into the spasm. If the convulsion is general, the child straightens out or bends backward, the limbs become rigid, and the features lose their natural expression. In this stage the eyes are usually open, and the pupils dilated; the hands tightly clinched; following this is the clonic stage, in which

the limbs are alternately flexed and extended, the muscles of the face twitch, and the eyeballs roll, the jaws are forcibly closed and the tongue may be bitten. Respiration is greatly disturbed, the pulse is rapid and often intermittent; consciousness is completely lost. The convulsion lasts from a few seconds to half an hour or more, when the child regains consciousness gradually, but soon becomes drowsy and finally falls asleep.

Convulsions occurring at the beginning of the eruptive fevers generally subside, but if repeated after the eruption appears the child generally dies. The prognosis, in general, is better if the convulsions are not of great length, if the interval between is long, and if consciousness soon returns.

Treatment. The child should be placed in a warm bath if it can be done, if not, put the feet and legs into a pail of warm water to which mustard has been added, and apply to the head cloths dipped in cold water. This preliminary treatment applies to most cases. But in general eclampsia should be treated according to the cause, and as with young children it is frequently found in the stomach and bowels, an emetic may be given to free the stomach and a cathartic to free the bowels of the offending contents.

A teaspoonful or more of the syrup of Ipecac may be given to a child one or two years old and repeated in fifteen minutes if needed. For older children a teaspoonful of the compound syrup of squills may be given with an equal part of the syrup of Ipecac. If these

syrups are not at hand a little powdered alum given in warm water will act well as an emetic.

The best thing to do generally, when it is desirable to secure a prompt action of the bowels, is to give the child an injection of warm soapy water, from half a pint to a pint, thrown into the rectum, and repeated if needed. Castor oil may be given if a thorough operation is not obtained, or the aromatic syrup of Rhubarb, or some other convenient cathartic. This treatment, if the convulsion is caused by something eaten, is certainly safe, and is the proper thing to be done at once, and will in many cases prevent a return of the convulsion.

If these measures do not bring prompt relief, medicines which act on the nervous system are to be given, of which the bromide of potassium is the safest and best for non-professional persons to handle. Twenty grains may be dissolved in eight teaspoonfuls of sweetened water and one teaspoonful given every ten or fifteen minutes to a child one year old, twice the quantity to one two or three years old, till the convulsions cease.

If the convulsion arises at the commencement, or in the course of cholera infantum, inflammation of the bowels, or dysentery, a warm flaxseed poultice, to which a little mustard has been added, should be placed upon the bowels. When pain is a prominent symptom in these attacks, it is probably true that a few doses of paregoric may prevent a recurrence of the convulsion, through its soothing effect upon the nervous centers.

Partial Convulsions, usually called spasms, are more common, perhaps, than general convulsions, the form which has been above described. In this kind or variety, the muscles of the eyes and face, one or both extremities, and other muscles and parts of the body, are seized with spasmodic movements, or contractions more or less severe. "Inward fits" and "Nine-day-fits" are examples of partial convulsions. For a description of the latter, see page 62; and "Child Crowing," page 63. For a description of general convulsions, by another writer, see page 63.

DISEASES OF THE RESPIRATORY ORGANS.

Next to the ailments which take their origin from disorders of the alimentary canal—the mouth, stomach, and intestinal tube, the most common are those of the air passages, or respiratory organs, from which we have catarrhs, coughs and colds, bronchitis, pneumonia, etc. A description of these affections, by different authors, is here given.

Bronchial Affections of Children. The bronchial tubes or air-pipes convey air to the lungs, to feed the blood with oxygen. They are two in number, and lead from the windpipe or trachea into the lungs, where they split up into smaller and smaller branches. The left is nearly twice as long as the right, but it is not so large; consequently, foreign bodies accidentally entering the windpipe are more likely to fall into the right tube. When a child has been exposed to cold, damp air, smoke, irritating vapors, damp bed, etc., congestion ensues, which soon passes on into inflammation. The tube-walls are then red, hot, swollen, and weeping; the free passage of air, at first only impeded, is soon gravely obstructed; carbonic acid accumulates in the blood; and nature strives to clear the way by setting up a harassing cough, in order to promote expulsion of the glairy mucus or prevalent secretion. There is chilliness, a stuffy feeling of oppression in the chest, rapid

breathing, high temperature (fever), headache, quick pulse, and furred tongue; and in bad cases, the sides of the nose work convulsively. The child undoubtedly has *bronchitis*. If the trouble is situate in the two upper or larger tubes that emerge from the windpipe, the case is less urgent, but when the smaller subdivisions are affected, closer to the lungs, the outlook will be more serious, as capillary bronchitis is prone to end in broncho-pneumonia, or perhaps in collapse of the lung. It also involves still greater difficulty in breathing, sometimes threatening suffocation; and the child may become fatally prostrated, or die in delirium or coma; for the calibre of the capillary tubes is narrowed more appreciably than that of the larger, and the danger is proportionately greater. Bronchitis in infancy and childhood is always a formidable disease, and calls for the earliest attention. Its symptoms are palpable, and not easily mistaken; and an intelligent parent or guardian has little excuse for neglect. Immediately that a child developes some or all of the foregoing symptoms, after exposure, it should be put to rest in a blanket bed, in a warm, equal temperature, constantly moistened by steam. This is easily secured by means of a steam kettle, or jugs of boiling water; and it is well to administer a mustard or ipecac emetic, at the onset. This may be repeated as occasion arises, or whenever the tubes are so clogged with mucus as to prevent sleep. A tablespoonful of mustard in a bath of hot water is frequently of much benefit. A jacket-poultice of flaxseed may be made to encompass

the entire chest, or equal parts of mustard and flaxseed may be applied to the front. Sometimes turpentine on flannel or croton-oil liniment are used. Warm demulcent drinks, such as barley-water or flaxseed tea, should be given; and much relief often follows the administration of frequent small doses of ipecacuanha. Half a teaspoonful of the wine may be added to eight tablespoonfuls of sugared water, and a teaspoonful of this given every two or three hours, to a child under five years of age. If carbonate of ammonia or chlorate of potash are at hand, one or two grains of either or both may also be given in water every three or four hours. Some of the above simple remedies are to be found in every household; and a clinical thermometer is a most valuable investment, especially in country residences. At the commencement of illness, the parent should ascertain the temperature, and watch its rise. Should it register 101° or 102° , and either remain there or mount still higher, medical aid should be sought. Three minutes under the tongue, or five minutes under the arm will give reliable indications. The above treatment includes about as much as the mother can safely employ before the doctor comes; but she is not justified in administering the stronger agents that may be called for by the growing exigencies of the case.

Capillary Broncnitis affects the ultimate ramifications of the bronchial tubes, where they enter the vesicles of the lungs; and, as before stated, is more dan-

gerous, because the swollen lining of the tube-walls more completely obstructs the passage of air, and invites emphysema and pulmonary collapse. The countenance is dusky and fearsome, and the veins are prominent on the surface. The breathing is very much hurried, and out of all proportion to the pulse, and the chest and belly are drawn inward with each inspiration in severe cases; cough is incessant, and expectoration difficult. The temperature runs high, the urine is diminished; and increasing prostration or general dropsy may usher in delirium, coma, or death. In this form of bronchitis, steam should be persistently used, and emetics and all lowering means employed with caution; but a blister is often of signal benefit, when the fever is excessive, and the respiration greatly obstructed. Or dry wrapping over the chest may be tried. Most of these cases call for stimulants and supporting treatment; and opium is best left severely alone. As for diet, it should be nutritious, as hot thickened soups, eggs, arrowroot, and custard, administered little and often. *Capillary Bronchitis* often merges into *Catarrhal Pneumonia*, by extension of inflammation into the lung tissues. This disease occurs in children as an acute affection, whereas in adults, it is generally chronic, supervening on an attack of chronic bronchitis. The pulse and temperature rise at the same time; breathing is urgently impeded, but expectoration diminishes, and the cough becomes hacking and painful. The child may now become comatose. Hot moist poultices, and about twenty drops

of brandy every two or three hours, are indicated; but the doctor must be called as soon as possible.

Acute Croupous Pneumonia is an inflammation of lung tissue with exudation of fibrine into the air-cells. It commonly arises from cold or sudden chill when the body is heated; hence it often makes a sad ending to a children's party. It has three stages, those of engorgement, red and gray hepatisation. It usually attacks one lung, in its lower part, but may involve the whole of one or both; and it is either heralded by a chill and rapid rise of temperature, or the chill may be replaced by vomiting or convulsions. There is a stabbing pain at the affected spot, increased by movement or deep breathing; dyspnœa, and a restrained cough, held back on account of the pain it produces, and soon a viscid expectoration, with a rusty or brick-dust tinge. The surface is dry and burning; the pulse rapid and full at first, but later on it weakens. The cheeks are marked by circumscribed redness, the lips bluish, and often eruptive. Headache, coated tongue, lost appetite, and increased thirst supply the remaining prominent symptoms. In favorable cases, these signs abate in about a week; otherwise death may occur from sheer exhaustion. Similar initial treatment to that recommended for bronchitis may be adopted; but this disease needs early professional attention. Of course, for the physician, the *physical* signs of the above-mentioned diseases have the greatest interest; but they have been purposely omitted

for obvious reasons ; and parents will have done all that lays in their province, if they intelligently use the simple remedies here suggested, and bear in mind that heat and moisture are the main domestic helps to the obstructed breathing.

Pleurisy and Pneumonia. (See also description of pneumonia above by another writer.) Pleurisy, as an independent affection, is rare in a child under five years of age ; it is not at all likely that the reader will ever meet a case at this age, but the affection is quite common as accompanying pneumonia. Older children, however, sometimes have pleurisy from exposure to cold. The prominent symptoms of acute pleurisy are, a stitch pain in the side, felt particularly when the patient coughs or takes a long breath ; a dry cough, slight fever and rapid breathing, and more or less tenderness of the side on pressure. A mustard draught should be applied to the side and several doses of tincture of aconite given to produce perspiration.

Pneumonia, which is the same thing as “lung fever”, is an inflammation of some part of the lung substance. It is a disease not of easy recognition in a young child. It occurs in two principal ways, that is, it may be either a primary or a secondary disease. By a primary disease is meant, one beginning independently of another disease, by secondary, one that attends some other disease, or is a complication of it. Primary pneumonia, in infancy, is a rare thing, the secondary form is not uncom-

mon, as attending bronchitis, measles, whooping cough, etc. Primary pneumonia, when it does occur, is apt to be mistaken for pleurisy, bronchitis, an essential fever, scarlet fever, intermittent fever, brain fever (meningitis), etc.

The characteristic symptoms of pneumonia are: a high fever, a flushed face, full and rapid pulse, hurried breathing and expiratory moan (a little grunting sound with each breath), an expression of the face indicative of suffering, a cough and often a stitch pain in the side, due to the co-existing pleurisy. Coughing seems to be painful. If the pneumonia is secondary, as it is much more likely to be, the symptoms will be mixed with those of the primary disease, and in many instances the former disease is not recognized. If in the course of bronchitis, measles, whooping cough, etc., the patient seems to get worse without a well understood cause, pneumonia should be thought of as the possible cause. In favorable cases pneumonia in children runs its course in a week or ten days; the breathing becomes less oppressive, the fever subsides, the expression of the face is better, and health rapidly returns. In the preceding article on "Bronchial Affections in Children," pneumonia is explained as a complication of bronchitis. Of course the treatment of pneumonia should, in all cases if possible, be left to the hands of a skillful physician. It is here briefly described, that any intelligent parent may have some correct knowledge of its symptoms and manner of attack.

Croup. There are three varieties of croup, namely:

1st, the mild form. This, properly speaking, is false, or spasmodic croup.

2d, the severe form, which much resembles true croup, but differs from it in not having the false membrane, and is also spasmodic croup.

3d, the true or membranous croup, which is most dangerous, and often proves fatal.

1. The first variety, simple spasmodic croup, is not a dangerous disease. It is generally the result of a cold, or it may arise from indigestion, or long continued crying. It generally occurs in cold or damp weather. The child goes to bed apparently in good health, but is suddenly, usually after midnight, awaked by a peculiar barking, or crowing cough, and more or less difficulty of breathing. At first the face may be flushed, but soon it becomes purple, and finally the child becomes deathly pale, and coughs in the peculiar manner above referred to. One cannot very well mistake the disease. Weak and strong children alike are liable to the attack.

There may, or there may not be some slight inflammation of the lining of the larynx [windpipe], which causes the spasmodic action, the cough and other symptoms. This mild form is next to never fatal, and the application of a few simple remedies will soon relieve the patient, and there is no further danger, except that children are liable to be attacked again, at some future time. The disease is so common here, [Philadelphia]

that nearly all mothers who have small children know how to manage it, and keep on hand the remedies best suited to it. It seldom occurs in children under one or over ten years, and is most frequent between the ages of two and five years. After the first attack measures are to be taken to prevent another during the second and third nights. During the day the child appears to be quite well, except a slight cough and hoarseness.

2. The severe form of false or spasmodic croup differs little from the foregoing, except that the spasms, or fits of coughing continue much longer, and come on at shorter intervals. It may be a continuation of the mild form, growing worse. The child is, generally, taken before midnight with the first attack of the severe form, and is apt to have another towards morning, before daylight. The extent of the inflammation in the larynx is much greater than in the first, and unless vigorous measures are resorted to this form may prove fatal. This variety is sometimes difficult to distinguish from true membranous croup, except that there is no false membrane, though all the other symptoms are apparently the same. There is fever, suffocation threatens, the voice is lost in a mere whisper, or is altogether inaudible. The face is pale and deathlike, the child becomes delirious and falls into a stupor, and death occurs by slow asphyxia. Here much depends on the treatment which is more closely allied to the treatment of true croup. It takes longer to get over this, than over the mild variety of the dis-

ease. The little patient may be from six to eight days until he has entirely recovered.

3. The third variety is true croup, or membranous croup. This is a most dangerous affection. It comes on slowly, not like the others. The child has fever and a hoarse croupy cough, and shows signs of having a bad cold. The hoarseness increases as the disease advances from day to day. The voice after a time is changed to a whisper or becomes altogether inaudible. The cough becomes suppressed, and the child struggles for breath, tears at its throat, until it becomes unconscious and death closes the scene. All this is owing to a deposit of false membrane along the lining of the larynx, or windpipe. The child's only salvation is the loosening and expulsion of this false membrane. If the child recovers, the hoarseness continues for several weeks. The severe form of spasmodic croup only continues for a few days, seldom more than three or four days.

In the first two varieties after the paroxysm the child seems well, has no fever, or very little. The voice is but slightly hoarse or perfectly natural, and not whispering. If the paroxysm returns the second night, in false croup, it is less severe. The cough becomes loose and the hoarseness disappears. This is not the case with true croup, in which the hoarseness and dryness of the cough increase from day to day, until the cough becomes almost entirely suppressed, and the hoarseness is changed into a whisper, and the voice is lost.

Let mothers remember that when their child wakes

in the night with this peculiar cough, somewhat resembling the barking of a dog or the crowing of a chicken, and with the difficulty of breathing above referred to, that the child has the croup, probably spasmodic croup.

Treatment. The first remedy to be tried is hot water. Give the child a few tablespoonfuls as hot as it can drink, and use cloths wrung out of hot water wrapped about the neck; and a warm bath, for ten or twenty minutes. This will, generally, relieve the spasm. Wrap the child in a warm blanket, as soon as taken out of the bath, dry the skin by rubbing it gently, and put the child to bed. It will soon go to sleep, and will not be disturbed for the rest of the night.

One remedy which I have always used with best results is the *Syrup of Garlic*. If there is much difficulty in breathing, I give a teaspoonful at once, and in ten minutes another, if required. This will, generally, relieve without resorting to the bath. This remedy should be kept on hand in every house where there are children. The *Syrup of Squills*, one-half teaspoonful, and in ten minutes another, will act well. A little paregoric, three to five drops, may be added to each dose of the Syrup of Squills; or twenty drops of the Compound Syrup of Squills may be used. If these remedies fail to relieve, which they seldom do, then an alum emetic will be best. Take one heaped teaspoonful of powdered alum, and mix with about two tablespoonfuls of molasses or honey, or what is still better Syrup of Ipecac. Mix well, and give a teaspoonful of this to the child every five or ten

minutes, in a little lukewarm water, until the child vomits thoroughly. The alum emetic is perfectly harmless, and in this disease is highly beneficial, and effective. After the child has vomited, give the Syrup of Garlic, or squills and paregoric. A few doses of any one of these remedies must be given during the following day, and before the child retires on the following night, to prevent a second attack. A dose of magnesia will be required on the following day, one-half teaspoonful, in milk, will be sufficient. I prefer magnesia to castor oil, though castor oil may be used instead, or the Syrup of Rhubarb. In the mild form this is all that will be required, and the child will get well.

In the severe form of false croup it is best to begin with the alum emetic at once, and the warm bath. This should be followed by Syrup of Squills or Garlic, with a little paregoric added. One or two drachms of paregoric and one and a half ounce each of Syrup of Squills and Garlic, given during the day at intervals of from three to four hours, dose, one teaspoonful to a child five years old. A little of the Syrup of Ipecac may be added. All these remedies make the cough moist and loose, and prevent a return of the spasm of croup. If nothing else is at hand, the *Syrup of Ipecac* may be given at first and in one or two teaspoonful doses, till free vomiting is produced.

Hive Syrup may be used alone; it should be kept on hand in every family where there are small children. In this disease it will be found a most useful remedy.

A tea made of flaxseed, slippery elm, or seneca snake root, properly sweetened, and a slice of lemon added, will be found useful as a drink during the day, in addition to the other remedies. During the treatment, and for a few days after the first paroxysm, keep the child in a warm room, and under no circumstances expose it to a cold blast of air. The diet must be of easy digestion and simple.

No treatment for membranous croup will be suggested, as there will be time to call in a skillful physician, who will be needed to manage this formidable disease, unlike that of spasmodic croup, often successfully treated by intelligent mothers.

THE CONTAGIOUS DISEASES.

Measles. This disease is the most common of the so called children's diseases, though neither age nor sex is exempt from it. As one attack is all a person has, far more children than adults suffer from it. In the great majority of cases it affects the mucous membranes of the eyes, nose, throat and lungs, and the skin. The nature of the contagion is unknown, but there is no doubt it is developed in the air passages of the nose, throat and lungs, and is transmitted in most cases by the breath, hence at short distances; more rarely it is by the clothing, and mucus from the nose and throat, but this is very unusual. The time for the development of the disease is about eight days after exposure, when there begins to be a harsh, dry cough, with some rawness of the throat, followed by a watery condition of the eyes, and a watery discharge from the nose. About this time the characteristic red spots in the back part of the roof of the mouth can be plainly seen. This stage of the disease lasts, as a rule, about four days, though in severe forms it may two or three days longer. Then the eruption begins to appear on the forehead and face, and gradually extends over the neck, body and limbs. The time required for this varies, at times spreading over the whole surface in a few hours, but as a rule, two days from the time the first spots appear the whole surface of the body is covered.

The eruption is unlike any other, when fully devel-

oped. At the very first there is a similarity to the eruption of scarlet fever and German measles. In measles, the beginning of the eruption is in fine points of a dark red color. The points or spots in twelve to twenty-four hours unite in little half moon shaped patches which are raised slightly above the surrounding skin—the skin between them being natural. No matter how numerous the patches are the skin between them is natural. The eruption of scarlet fever is bright red as its name indicates. German measles has reddish spots, but not the other symptoms mentioned—and has no relation to measles.

If the patient, whether child or adult, begins to have a cough, dry and harsh, the eyes red and watery and a watery discharge from the nose, also a mottled appearance of the roof of the mouth you may be sure measles are developing. There is no other disease which attacks in this way. Hay fever or influenza has a watery discharge from the eyes and nose, and rawness of the throat, but the throat does not have the mottled appearance. Another symptom which should be mentioned is the odor of the patient. It cannot be described but it is known as the “measley smell,” and once experienced will be readily recognized. Nursing babes as a rule are exempt from measles.

The duration of the disease varies, but in uncomplicated cases of average severity, the time from exposure to completion of the eruption is fourteen days, and from the eruption to its disappearance, six to seven days.

This in most cases is followed by a fine scaly or branny desquamation, lasting four or more days. The above is a description of a case of measles running a natural course in a patient usually in good health.

The treatment of measles ordinarily is very little, as the disease runs a stated course. The patient should be kept in a well ventilated darkened room, at a temperature from 65 to 68 degrees, and the bedclothes not enough to give discomfort by their weight or warmth. Keeping a patient in a profuse perspiration is injurious, as it is very debilitating, and the patient is far more liable to be injuriously affected by a draught of air.

The fever which accompanies the disease needs little, if any treatment, as it will not diminish until the eruption is well developed. Usually the temperature is the highest immediately preceding, and for the first twenty-four hours after its appearance. On the second day of the eruption the severe symptoms begin to abate. Five drops of tincture of aconite in a tumbler of water, a teaspoonful every hour until there is a moisture on the skin is sometimes beneficial. For the thirst, water—not ice water—may be freely given in small quantities.

The most troublesome of all the symptoms is the harassing cough. The cough syrups, so commonly given to loosen it, are of no benefit, as there is no mucus to raise. Three to five drops of tincture of belladonna, in a tumbler of water, a teaspoonful of which may be given every half hour to two hours, according to the severity of the cough, often alleviates. If the cough

continues after the eruption is well developed, a physician should be called, as one of the most dangerous complications is pneumonia, which no one but a physician should attempt to treat. During the coughing stages gum Arabic water, by its soothing properties, makes an excellent drink. Flaxseed tea so common in the country makes a good drink. Often the eruption is delayed, and in such cases, baths of hot mustard water will often cause it to appear. Warm or hot lemonade is also very useful. The nauseous and often filthy teas, so often given are worse than useless. Do not worry because the eruption does not appear as soon as you think it ought, sooner or later it will come out. After the eruption appears, keep the patient comfortable, and let the disease take its course. Pneumonia as a complication has been mentioned, another complication not so dangerous as pneumonia, is a profuse, watery diarrhœa. A physician alone should be allowed to treat this.

Diet. As a rule during the first stage, the patients have very little appetite; if so, do not urge food upon them. The food should be light and nutritious, such as the various kinds of gruel, boiled rice, toast and *weak* tea. Milk is both food and drink, and if relished by the patient, is usually well borne. After the fever begins to lessen, meat broths, oysters, baked, not boiled potatoes, may be given with safety, and as convalescence progresses the usual diet may be resumed. The patient should avoid undue exposure to cold for several weeks after the attack.

SCARLET FEVER.

Scarlet fever, scarletina, scarlet rash, canker and rash, are different names for one and the same disease. This eruptive contagious fever is one of the most dreaded diseases of childhood. It was formerly considered a variety of measles, till its prevalence in London from the year 1661 to 1665, when the disease was carefully studied and thereafter considered an entirely different and distinct affection. It is a very contagious disease, but the nature of the contagion is unknown. No age is exempt, but it is extremely rare in infants less than one year old, and quite rare in adults. Children between two and seven years are the most susceptible to it. If a child can escape the disease till after his tenth or twelfth year, his chances of evading the contagion are greater, and the danger of the disease if contracted is lessened. The period of incubation, that is, the time between exposure and attack, varies; in the majority of cases it is from four to seven days. The regular form of scarlet fever may be preceded for a day or two by slight languor and loss of appetite, but usually the disease begins abruptly, with high fever, chilly sensations, vomiting, sore throat, frequent pulse (130 to 140) and thirst. Less commonly convulsions, delirium or stupor, and persistent vomiting are early symptoms. The remarkable and distinctive phenomena about the attack before the eruption are: the sudden onset from apparent good health, the high fever, the vomiting and the

sore throat. These things of themselves should create a strong suspicion of the nature of the coming disease, if the child has not previously had scarlet fever.

If the sore throat is examined at this early stage it will be found covered with a scarlet efflorescence, which as a rule, appears here before it does on the skin. When the sickness has continued about twenty-four hours, it may be less or more, another highly significant symptom is added, namely, the eruption, and it puts a distinguishing mark upon the disease, as in no other eruptive fever does an eruption appear so early, except Rôtheln. The rash is usually first seen on the sides of the face or neck, and front of the chest; it rapidly spreads over the whole body, being more intense on the chest, where it acquires, on the second day, the bright red or scarlet color, which gives the name to the disease. The eruption when well out looks the same as if the skin had been reddened by a mustard plaster in patches of irregular shape and size; these patches soon run together, and give to a large portion of the skin the appearance of uniform, smooth, flat and scarlet redness. The tongue, which is at first furred white, has a peculiar appearance when the coat comes off; it is then called the "strawberry tongue." The rash sometimes recedes to appear again. When the inflammation of the skin is quite intense, small water blisters (vesicles) may be noticed. On the fourth or fifth day the redness begins to fade, and on the seventh the epidermis begins to come off in scales, called desquamation. This is the regular or

typical form, but cases very different are often seen.

The disease sometimes runs a mild course, with slight or indistinct eruption and moderate fever. In some instances the affection seems to be confined to the throat mostly, with pain and stiffness of the neck and much swelling of the glands of the neck. There may be patches of canker upon the throat from which fact the disease was formerly called "Canker and Rash." There may be symptoms of croup—a true membrane sometimes forms, which is diphtheretic. In nearly all epidemics of scarlet fever irregular forms occur. The disease is generally milder, or runs a more favorable course when the epidemic is declining, than it does on its first appearance in a community. Scarlet fever has many complications and sequels, such as disease of the kidneys attended with dropsy and blood poisoning, abscesses in the ear and about the neck, rheumatism, pleurisy, etc. The malignant form begins with severe symptoms, such as persistent vomiting, intense headache, delirium or convulsions, high fever, great restlessness or in some cases, coma, and it is evident to all observers from the first, that the child is dangerously ill.

In so called *Scarlatina Anginosa*, the disease is chiefly confined to the throat, which is greatly inflamed. The rash may not appear till the third or fourth day, and in some cases it may not appear at all.

Different epidemics differ very much in severity; in some the disease runs a mild course, and nearly all children who are attacked recover; in other epidemics the

disease is severe, and fatal in many instances. There are some affections which may be mistaken for scarlet fever, namely, measles, German measles, rose rash, and erythema. A description of these latter affections may be found in preceding pages, and a table, showing some points of difference between scarlet fever and German measles, may be found on page 395.

Some points of dissimilarity between measles and scarlet fever are as follows :

MEASLES.	SCARLET FEVER.
Begins with symptoms of a cold in the head, sneezing, watery and inflamed eyes, etc.	No symptoms of this kind.
A dry, harsh cough.	No cough except in rare cases.
No vomiting.	Vomiting a very common initial symptom.
Rash appears from the third to fifth day of fever.	Rash appears, at the end of the first day of fever, sometimes earlier, sometimes later.
Rash is darkish rose colored, and in blotches slightly raised.	Rash is flat and bright red, like that made by a mustard plaster.
Rash appears first on the soft palate and roof of mouth, second or third day.	Rash appears in throat early.
Tongue simply coated or red.	Tongue at first coated white, afterwards, "strawberry tongue."

It should be borne in mind that in the above table reference is made to the regular form of these fevers; in the irregular forms these points of distinction might not be found.

Treatment. If a child is suspected of having scarlet fever, and if there are other children in the house, the sick child should be at once separated from them, and all reasonable precautions taken to prevent the spread of the contagion. A physician should be called at once.

Domestic medicines have but little effect if any in controlling the disease, besides dangerous complications are liable to arise, which call for skillful treatment.

In the way of nursing, cooling drinks, like lemonade, may be allowed, and in the early stages, when the skin is hot and dry, and the pulse full and strong, a cooling sponge bath of bay rum, or alcohol and water, is grateful to the patient and is beneficial.

In the stage of desquamation, that is, when the epidermis, or outer skin is coming off, great care should be taken in preventing exposure to cold and dampness, and even for a few weeks thereafter, for acute Bright's disease, attended with dropsy, is often caused by such exposure. Very great care is needed to prevent this common and dangerous complication.

To prevent the itching and burning feeling the skin should be smeared with vasaline or some other agreeable oily substance, and it is said that this prevents the spread of the contagion.

The following directions for fumigating a room after scarlet fever or diphtheria comes from the New York City Board of Health:

“The windows and doors of the room and fireplace should be tightly closed. Everything that was in the room during sickness should be left in it. If the carpet was not removed when sickness commenced, it should be taken up and raised as far as possible from the floor, on chairs or in any other manner; one board of the floor should be taken up. An iron kettle should then be placed on the floor, on bricks, and five pounds of sulphur placed therein, or one pound of sulphur for each thousand cubic feet to be fumigated; upon this two ounces of alcohol are poured and set on fire. Every one must withdraw from the room immediately, as the fumes are pois-

onous. The precautions taken with the carpet, and the removal of the board from the floor, allow the fumes of the burning sulphur to pass beneath the floor and between the walls, and to destroy any germs of disease which may be there. At the expiration of ten (10) hours, not before the room may be opened. All the windows, doors, and the fireplace should remain open for twenty-four hours, that everything may be well aired."

German Measles. (Rötheln, False Measles.) German measles is an eruptive, contagious disease of mild character, attended with slight fever and with other symptoms which resemble those of true measles and scarlet fever. Rötheln is the German name. The affection is interesting and important, chiefly on account of its likeness to the above named diseases. It is, as far as being recognized as a distinct disease, a new one; for it was formerly supposed to be a hybrid of measles and scarlet fever. It is classed as one of the diseases of childhood, but it occurs in adults, though rarely after 40 years of age. Sucklings and young infants, as a rule, do not take the disease.

In some instances the first thing to call attention to the existence of the disease, is the eruption on the skin, in other cases certain so called prodromes manifest themselves before the rash appears, such as sneezing, running from the nose and eyes, slight cough and more or less fever. The rash may come out on the first day, or not till the second, third, or even the fifth, being remarkably irregular in this respect. In the majority of cases it appears the first day of illness, and consists of small slightly raised red spots on the skin, varying in

size from the head of a pin to a split pea; they may be so minute that the skin appears covered with innumerable fine dots. If the skin is examined carefully it will be found of a healthy color between these points of eruption; the spots may, however, run together and thus form large patches of uniform redness, not easily distinguished from those of scarlet fever. It is said that the rash is sometimes brown in color. The disease is often very mild, the child being able to be around as usual; in other cases considerable illness is felt. It is only the mild forms of true measles and scarletina that can be mistaken for German measles. The affection is more common in England, and on the continent, than in this country. We quote from an English writer a short description of the disease: "Slight fullness of head, heaviness, pain, or giddiness is felt, with aching of the back and limbs, and a little tenderness of the throat, for twelve hours or a day before the rash appears: very often the rash is seen with surprise, as the feeling of illness has passed, or may have escaped notice. Some enlargement of the glands of the neck is an early sign, most marked in children. There is redness of the fauces [throat], less mottled than in measles, not so intense as in scarlet fever; the tonsils are full and smooth; there is no ulceration, sometimes an odor, as in measles, attends the rash. The eyes are suffused, but there is little or no coryza; the lids are somewhat swollen and irritable; the face is flushed and the cheeks are full and red before the appearance of the spots. These are

brilliant red, raised, rounded, with clear skin between them, but they soon coalesce; not grouped as in measles, the spots are more prominent than in scarlet fever, and there is not that finely diffused redness of the neck and chest observed in that disease.

Moreover the rash is already fading from the face and upper part of the body while extending to the limbs, so that it is less intense on the third day." *Quain's Med. Dictionary.*

The most important thing connected with this disease, is to avoid the mistake of calling a mild case of scarlet fever a case of German Measles.

The following table shows some dissimilar symptoms of these eruptive diseases.

GERMAN MEASLES.	SCARLETINA.	MEASLES.
Symptoms of invasion often absent.	Symptoms of invasion never absent, continue about one day.	Symptoms of invasion never absent, continue 3 to 5 days.
Generally a little sore throat.	Decided sore throat.	Sore throat, if any, slight.
Sometimes, a slight cough.	No cough.	A hard dry cough, nearly always.
Temperature 99 to 100 degrees.	Temperature high, 103 to 105 degrees.	Temperature 102 degrees or more.
Eruption in slightly raised pimples, or of quite uniform redness.	Smooth scarlet rash.	Eruption in blotches, a little raised, making the skin rough to the feel.
Eruption light in color	Eruption scarlet in color.	Eruption darker in color.
Characteristic complications or sequels, quite rare.	Complications not uncommon, such as, acute Bright's disease, abscesses, sores in the ear, rheumatism, etc.	Complications, such as bronchitis, pneumonia, intestinal inflammation, diarrhœa, quick consumption, not uncommon.

In the way of treatment but little, if any, medicine is needed. Keeping within doors for a few days and avoid-

ing exposure to cold and dampness are proper hygienic measures.

Chicken Pox (*Varicella*) is a contagious, eruptive disease of little importance, almost peculiar to infants and children. After a period of short incubation—four days—an eruption of transparent water blisters (vesicles), not numerous, begins generally on the breast and shoulders, sometimes on the scalp, rarely a few on the face; each vesicle is surrounded by slight redness; the affection runs its course in about six days. Fever and other constitutional symptoms, if any, are slight. The disease might possibly be mistaken for varioloid; in the latter disease hard red pimples first appear, but in chicken-pox the eruption is vesicular. It is stated by some writers that at the very first the eruption appears in the form of small red spots upon which the vesicles are developed the second day. On the fourth day the vesicles begin to shoal and on the fifth or sixth they dry into a thin brownish scab. While this course is pursued by one crop of vesicles, others appear, so that after a few days, the eruption may be seen in all its stages of development at the same time. Little difficulty will be found in recognizing a case of chicken-pox if it is recollected that the eruption is in the form of small water blisters, not very numerous, and with healthy skin intervening. The patient is only slightly sick, if sick at all. No other eruptive disease bears a close resemblance to it, and no treatment is required, save attention to the bowels.

DIPHTHERIA.

Diphtheria, according to the belief of those who have carefully examined the evidences, is not a new disease. It is said that medical writers who lived in the first century give unmistakable accounts of a throat distemper which was, probably, the same thing as the disease now called diphtheria; some writers say that Homer, and Hippocrates, the father of medicine, who lived in the fourth century, B. C., referred to the disease in their writings.

It is a curious fact that the contagious and infectious diseases all came from the old world to the new. Small-pox was first brought to this country by European adventurers and communicated to the Incas, the ancient inhabitants of Peru, to the Aztecs of Mexico, and lo! to the poor Indians. It had been the most terrible and destructive contagious disease in the world till it received almost its death blow by the practice of vaccination, introduced by Dr. Edward Jenner of England, in the year 1796, to the immortal glory of medical science. Cholera has been somewhat checked by modern prophylactic and sanitary measures. The contagious eruptive fevers are prevented from spreading in extensive epidemics by more scientific methods of limiting the contagion.

Though diphtheria has been long known and studied by medical men, as yet no medicine has been discovered which approximates a certainty of effecting a cure. The long list of fatal cases casts a dark shadow across the

pages of medical literature. It is supposed, or perhaps known, to be a germ disease, and germicides and antiseptics have been tried, but not with entirely satisfactory results. It is yet a mooted question whether the disease is really a constitutional one at first, having a local expression in the form of an exudated membrane upon the throat or other parts, or whether it is at the first a purely local affection, beginning with this membrane, from which in a short time systemic poisoning or infection results. Although diphtheria when it once seizes the patient, is not well controlled by medicine, it is now considered a preventable disease to a very great extent—it can, probably, be limited to the first case, or prevented from escaping upon the community, and in this sense, is preventable.

The contagion is propagated by the breath, by clothing and furniture and in many other ways. Unless a room in which a diphtheretic patient has been sick is thoroughly disinfected, it is liable to communicate the infection to a child entering it weeks or months thereafter. It is said that if the infectious germs of the disease are once lodged in sewers, cellars and dark damp places, where the sun seldom enters, that they remain and develop, and vapors arising from such places are likely to convey the *contagium* to susceptible persons, thus explaining cases in which the attack apparently occurs without exposure. It is thought that domestic animals, especially the feathered tribes, sometimes take the disease and communicate it to persons.

Children between the ages of two and twelve years are the most susceptible to the contagion of diphtheria, but an attack is not extremely rare in adults. One writer states that in Vienna, out of five hundred deaths from diphtheria, but one had reached the age of sixty years. This proportionate number of adults is altogether too small, according to the experience of the writer in passing through several epidemics; for instance, in one of these outbreaks the writer, then forty years of age, and also his wife contracted the disease; his mother, aged sixty-five years, and visiting the family, also caught the disease.

Symptoms. The prodromal, or fore-running symptoms of an attack of diphtheria may not be very distinctive—they may not markedly differ from those which usher in some other acute inflammatory diseases attended with sore throat. The attack often seemingly begins abruptly, or it may be preceded for a few days by languor, a little loss of strength and depression of spirits. In a well marked, or typical case, there is at first a feeling of chilliness, followed by more or less fever, often nausea or vomiting (in children), headache, pain in the back and limbs, and other fever symptoms, and loss of appetite and strength. Sore throat, a little stiffness of the neck and swelling of the glands at the angle of the lower jaw are soon noticed. These symptoms are sufficient to raise a reasonable suspicion of diphtheria, provided they are well marked and no additional symptoms are present, which plainly point to some other

ailment as the cause of the sickness. To make sure, or to verify the suspicion, the throat must be carefully examined. Take the patient to the window where there is good light, require him to open the mouth widely and speak the syllable ah, prolonging the sound, which brings the back part of the throat into good view, if not, the tongue must be depressed. If the case is one of diphtheria, and if the patient has been sick twenty-four hours, sometimes less, a diphtheretic patch or patches will probably be seen. At first a small slightly raised, whitish or grayish patch or pellicle is discovered in the depression of the reddened and swollen tonsil; it looks very much as if a small piece of common putty had been stuck upon the tonsil. Take a firm swab and try to brush off the patch; if it adheres firmly, or if when torn off a little blood appears, it means that the membrane is diphtheretic; the patch of membrane soon returns. The color of these patches changes with age; after a few days they grow darker and ragged looking. The throat is much inflamed and reddened over a considerable area. If the masses are easily brushed off, and if they are cheesy and friable—not membranes—they are exudates resulting from simple inflammation of the throat, or from tonsillitis; *follicular tonsillitis* is often mistaken for diphtheria, because of the whitish pellicles on the throat. In true diphtheria the characteristic false membrane is usually first discovered in the depressions of the swollen tonsils, but not always; it may spread to other parts of the throat as the soft palate and

water should be applied to the throat. Fifteen drops of the tincture of aconite should be added to half a tumblerful of water and a teaspoonful given every 20 minutes till the skin is moistened with perspiration. The patient ought to be kept in a warm bed. If old enough to gargle the throat, a weak solution of the chlorate of potash should be used for the purpose. Pounded ice may be allowed for the child to swallow, if the throat is much inflamed. It is well to give at first some laxative medicine.

Hoarseness due to Laryngitis. This affection is so common in childhood that it is worthy of mention. The larynx is that part of the wind-pipe in which the voice-forming apparatus is situated; if it is inflamed there is a change in the voice, or the voice may be entirely lost for a time. In its simple form, laryngitis is the result of a common cold, and is similar in its nature to a cold in the head (acute coryza,) or to bronchitis, which affections indeed often co-exist. Laryngitis is one of the principal causes of spasmodic and membranous croup. In simple laryngitis there is sometimes a dry harsh cough, but the breathing is usually natural, excepting a little hurried; in other cases nothing calls the attention to the affection, other than the hoarseness when the child cries or speaks. Even if the voice is entirely lost, mothers should not be alarmed for there is little or no danger in such a case, excepting that symptoms of croup appear. The child recovers from these

attacks in a week or more. The treatment may be the same as that recommended above for sore throat, which see.

Glandular Swellings of the Neck. It is not an uncommon thing for children, from some unhealthy condition of the system, to have one or more of the many glands about the neck greatly swollen. Physicians formerly were in the habit of calling all neck swellings and enlargements scrofulous, but it is only in exceptional cases that they are of this nature, because from exposure to cold and a sore throat such swellings are often noticed, disappearing in a few days. The writer has seen many cases in which these swellings came up without any well known cause, continued for several weeks, and then gradually disappeared; but it occasionally happens that they suppurate, that is, an abscess forms and breaks, and when healing has taken place a scar is left. It is good treatment in cases of these glandular swellings, at first, if there is not great inflammation, to paint them over with the tincture of iodine once or twice a day. Should there be considerable heat and redness, with a strong tendency to an abscess, a poultice should be applied till it breaks or is opened. If the child seems unhealthy and the swelling slow and indolent, the Compound Syrup of the Hypophosphites is an excellent medicine, and should be given—dose, a teaspoonful three times a day to a child five years old, a little more to an older child.

their nature to the nightmares of adults, free from danger to life. The attack may possibly return for several nights in succession, if the cause is not removed. Constipation of the bowels, over eating, or other disorders of the stomach, irritation from teething, intestinal worms and other causes may produce the trouble. To prevent a return all the known causes must be removed and the little patient's health and habits improved.

Sometimes a few doses of some laxative medicine is sufficient to a cure; in other cases, in which the stomach is overloaded, an emetic is the thing needed, afterwards, care that easily digested food in proper quantity is given.

A Rupture at the Navel is not infrequent in infants. It is known from the fact that when the child cries or coughs a little tumor is pressed out at the navel; complete healing had not taken place after the navel string came off. Usually the trouble is easily cured in this way: take a good bandage and sew up in it a silver half dollar; apply the bandage quite tightly around the body so that the silver piece will constantly press upon the rupture; by wearing this several weeks the infant is entirely cured.

Infants and young children are often ruptured in the groin. It is a fortunate thing that prompt treatment, as a rule, brings about a cure. A light, nicely fitting truss should be obtained, put on and worn till the hernial tumor entirely disappears, and even for sometime

thereafter, to prevent all danger of a return from a strain during violent efforts.

Inflammation of the Throat and Tonsils. Weak and scrofulous children are very apt to contract a slight cold and a sore throat from exposure, and after repeated attacks the tonsils remain in a condition of chronic enlargement, giving to the voice a peculiar tone. The mucous membrane of the throat is over sensitive and a slight exposure induces a sore throat. During the first attacks there is considerable fever, a throbbing pain in the throat and difficulty in swallowing. If the throat is examined, it is seen to be reddened and the tonsils more or less swollen; possibly there may be spots of a whitish color slightly resembling diphtheritic patches. The points of difference between these and true diphtheria patches are fully given under the subject diphtheria, which see.

Beginning in this way in older children, an abscess may form in the tonsil and after a time break, or the affection may disappear without an abscess. If chronic enlargement of the tonsils results, the child is apt to be deaf for a time.

In the treatment of the first attacks of this kind, if there is considerable fever and sore throat, two teaspoonfuls of the syrup of ipecac should be given, or enough to produce vomiting. Probably no treatment at first is so effective in aborting this affection. Children vomit without much difficulty. Flannels dipped in hot

to one teaspoonful three times a day; last dose at bedtime. Increase the dose according to age.

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Atropinæ sulph, two grains, aquæ dest. two ounces.
Mix. Dose—Give one drop for each year of age of the patient at 4 and 7 o'clock each evening.

Any good druggist will put up the above prescriptions. Avoid "sweets" and allow no fluids for a few hours before retiring; take the child up once after midnight to empty the bladder. The remedies should be given for several weeks, and the dose cautiously increased, if needed to have the desired effect. For ordinary cases there are no better remedies than these. Possibly a tonic may be required.

Falling of the Bowel, (Prolapse of the Anus.)

This painful accident may occur as a consequence of protracted diarrhœa, severe constipation and straining, or from great debility. It is quite easily recognized. The child is observed to suffer greatly after an operation of the bowels, and on examination a red tumor is discovered at the opening of the lower passage; it consists of folds of the rectum, or lower bowel, which have passed down below the sphincter muscle, and are so grasped by it that the pain continues till the protruded folds are put back into place. Reduction may be thus performed: smear the part with vaseline, sweet oil or lard, then with a piece of soft cloth gently press the folds back into the bowel, making sure the entire part is pressed within the constricting muscle. This is more

easily effected if the child lies belly down across the operator's lap.

If this cannot be done without producing too much pain, a cloth dipped in cold water or in hot water must be pressed upon the part till congestion is somewhat relieved, when another attempt must be made to reduce it. A pad may be needed to prevent the part from coming down again; this can be kept in place by binding it on by means of a strap, tied to one around the waist, or the child may be kept in bed for a few days.

Great care must be taken to prevent constipation, by giving some gentle laxative, thus preventing straining operations.

Night Terrors in Children. Dr. West, formerly the great English authority on the diseases of children, describes an attack as follows: "It happens sometimes that a child who has gone to bed apparently well and has slept soundly for a short time awakes suddenly in great terror and with a loud and piercing cry. The child will be found sitting up in its bed crying out as if in agony or fear, Oh dear! Oh dear! take it away! Father! Mother! while terror is depicted on its countenance and it does not recognize its parents, who alarmed by the shriek have come into the room, but seems wholly occupied with the fearful impression that has aroused it from sleep. By degrees consciousness returns."

There is no occasion for alarm from these seizures to which nervous children are subject; they are similar in

the ends of the long bones, especially at the wrist and ankles, so that these joints appear larger than natural; this sign confirms the suspicion of rickets, which other symptoms seem to point to, and the proper treatment should begin at once. An infant manifesting these symptoms should receive prompt attention with the reasonable expectation that a cure would be made. The writer from his own experience would recommend two remedies, which in his hands, have been remarkably effective, namely: cod liver oil and phosphorus, which may be given in combination. An emulsion of cod liver oil and the syrup of hypophosphites makes an excellent mixture. The syrup of the lacto-phosphate of lime to a feeble child with deficient development of the bone is a medicine highly valued—dose, a teaspoonful three times a day to a child two years old. If there are suspicions that rickets is threatening the medicine should by all means be given.

Incontinence of Urine, (Bed Wetting) is not an uncommon habit of children from three to twelve or fifteen years of age, and may continue till the child is much older. The causes are numerous, and could not be well understood except by a physician. Many physicians think the habit is brought on by allowing children to drink too much water or milk in the latter part of the day, or by exposure to cold in the night, or lying on the back in the night—a posture which is unfavorable to retention of urine if the neck of the bladder is irritable,

as it is liable to be. In some cases the habit may be cured in its early stages without medicine, by great care of the child, by allowing but a small amount of drink in the afternoon, and by taking the child up in the night to empty the bladder, but, generally speaking, appropriate remedies are required to break up the habit, and in many instances the child's health must be improved before a cure can be effected.

The last case I treated was uncontrollable till the Elixir of Gentian and Iron, a tonic, was prescribed, after which the trouble ceased. In the majority of cases the trouble is due to constitutional weakness or to weakness of certain muscles, or to undue irritability.

Dr. Johnston, of Washington, says:—

“I have been using for many years the *fluid extract of ergot* in the treatment of incontinence of urine in infants and children; and I almost regard it as a specific for the disease. I give to an infant from one to three years old, 5 to 10 drops; and to a patient from three to ten years, 10 to 20 drops every three hours. Few children object to its taste, and it should be continued uninterruptedly for two or three weeks, and resumed if the disease should return, in which case the doses ought to be gradually increased.”

Another high authority prescribes the following for a child three years of age:—

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Tincture belladonna, two drams, fluid extract of rhus aromatica, two ounces, glycerine, two ounces, water sufficient to make four ounces. Mix. Dose.—One-half

and debility a wonderfully good effect, while in biliousness they would be injurious.

Only light and easily digested foods, and in small quantities should be taken, avoiding all fatty foods.

Kidney Complaints. Patent medicines are very extensively advertised (and sold too) as "sure and safe cures" for these complaints. The people have been educated to regard nearly every urinary disorder as a kidney complaint; but as a matter of fact, the majority of the affections which receive this name, do not arise from a real disease of the kidneys—more commonly from some irritation or slight inflammation of the bladder; or from diseases of some adjacent organ, in oldish men from an enlargement of the prostate gland; or from some irritating, acid or ammoniacal condition of the urine. Again, some persons infer from a changed appearance of the water that they have a kidney disease—if the water deposits a brick dust sediment, or is very turbid and cloudy after cooling. Such unnatural appearances may possibly indicate a real disease of the kidneys, but more frequently they do not. Indigestion, a bilious disease, certain kinds of food or drinks, or disorders of some other organs of the body produce the abnormal condition.

Again, owing to an acid or irritating condition of the urine, a slight inflammation of the bladder, water passages or some disease of the rectum, and many other things, such as nervousness, there is often a desire to

pass water with unnatural frequency, sometimes attended with pain; the kidneys may be perfectly healthy.

Some of the most common chronic diseases of the kidneys are here briefly described, that persons proposing to take patent or other medicines for kidney disease, may have some basis for judging for themselves as to the nature of their complaints.

Bright's Disease. Briefly stated, chronic inflammation of the kidneys, which often results in chronic Bright's Disease, is variously produced—sudden or prolonged exposure to cold, which checks the healthy action of the skin and throws extra eliminating work upon the kidneys, produces congestion, which is the first stage of inflammation. Continued over eating of rich foods, indigestion and mal-assimilation throw an abnormal amount of work upon the kidneys which can be but imperfectly done—waste and poisonous materials of the body are largely eliminated by the kidneys, in some cases producing such an amount of irritation, that true inflammation ensues. Persons of intemperate habits, those who live in damp houses, and those poorly nourished, are more liable to the disease; it follows the acute form in some instances. It would be a bootless task to describe here the early symptoms of this disease; they are often insidious and uncertain; an examination of the urine, from time to time, for the presence of albumen and casts, is the only trustworthy means of settling the question as to the existence of Bright's disease.



DR. EDWARD JENNER.

The renowned doctor who introduced to the world the practice of Vaccination, the greatest achievement in prophylactic practice ever known. Dr. Jenner was born in Gloucestershire, Eng., in the year 1749. When convinced that vaccination would prevent small pox, he went up to London and made the discovery known. Physicians in the great metropolis, at first looked upon it with disfavor or incredulity, but within a year it came into favor with them. Parliament even rewarded him with generous gifts of money and praise (£30,000). In 1858 a statue was erected to his honor, in London.

much like those of biliousness and liver disease. The liver and the bile may be in a healthy condition, but the swelling of the bile-passages prevent its out-flow; disturbances of the stomach and jaundice are apt to be the prominent symptoms. The inflammation, which is the exciting cause of this trouble, extends up from the duodenum (the upper intestine into which the bile-duct opens) so that inflammation of the duodenum is the primary disease. This should be thought of as the possible cause of symptoms like those of liver complaint.

Treatment of Biliousness. If a person continues for a time in ill health, having more or less of the above named symptoms, and no other known disease is present to account for them, it may be inferred that he is bilious. There are two other ailments for which it may be mistaken, namely, indigestion and lithæmia. Coming to treatment, it may be said that for simple, yet often satisfactory treatment, the so called saline laxatives, such as Epsom salts, Seidlitz powders, Rochelle salts, and the laxative mineral waters, such as Vichy, Bethesda, Apollinaris, drank in considerable quantities, may be tried. From the writer's own experience, and from the united testimony of most patients as well as physicians, it must be said that, in cases of real biliousness no remedy has such a marked, immediate and wonderfully good effect as a pill made of blue mass, three grains, taken at night and followed in the morning, before eating, by one or two Seidlitz powders or a drink of Epsom or Rochelle salts, sufficient to produce a free

operation. Such treatment is perfectly harmless and perfectly good. If the patient is not cured the dose may be repeated the third night.

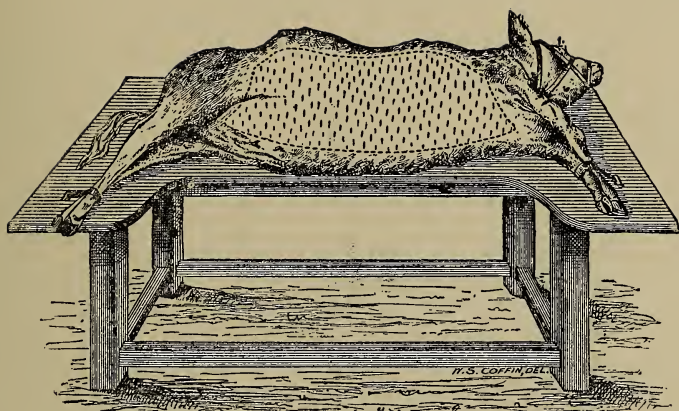
Besides these remedies, the diluted Nitromuriatic Acid in about 10 drop doses, taken in sugared water three or four times a day, has usually an excellent and curative effect.

The following mixture is a bitter dose, but in many cases it is extremely beneficial in biliousness from torpor of the liver: The Chloride of Ammonia, 3 drachms; Fluid Extract Dandelion Root, $\frac{1}{2}$ ounce; Syrup of Ipecac, 1 ounce; Compound Decoction of Aloes, 2 ounces; Compound Syrup of Stillingia, 2 ounces; water to make 8 ounces. Mix. Dose: a teaspoonful in sweetened water 3 or 4 times a day.

To some persons pills are more agreeable, and may be taken for these bilious troubles. The standard Compound Cathartic pills which every druggist keeps, often effect a cure; take two at night, and if needed, two the second night. Get from the druggist the Compound Rhubarb pill and take 2 or 3 every other night.

The sarsaparilla mixtures, so often taken for biliousness, are in the opinion of the writer, very poorly adapted to such cases, and may be positively harmful. The patient may recover while taking the medicine. but he probably would do better without it.

In a real case of biliousness, tonics are not well borne; for instance, some preparations of iron, combined with the bitter tonics, have in many cases of anæmia



Calf upon the Vaccinating Table (From Vaillard.)

In order to obtain vaccine matter [lymph] pure and in its full degree of strength, healthy calves, six or eight weeks old, are vaccinated, as represented in the above cut. The hair is first clipped and then the skin lathered and shaved with a razor. When the vesicles are ripe, the lymph is pressed out and smeared upon ivory points, or put into capillary glass tubes for use. Formerly the crust, or scab, was much used, but it is objectionable, as containing impurities. What is called in the market, "bovine virus," is thus obtained. It "takes" with more violence, but is supposed to afford surer protection against small pox. Ivory points thus charged can be bought in all large cities; they must be fresh to be effective.

Miscellaneous Subjects.

LIVER COMPLAINT AND BILIOUSNESS.

Perhaps no remark regarding the health is more frequently heard than this: "I am bilious, or I have the liver complaint. What are these affections and what are the symptoms which point to their real existence? A class of cases called bilious, manifest more or less of these phenomena: a poor appetite, a coated tongue, a bitter taste in the mouth, nausea and sometimes vomiting, usually constipation of the bowels, but possibly bilious diarrhœa, headache, giddiness, a feeling of languor and disinclination to physical or mental effort, and often great depression of spirits; and sometimes a dull and sleepy feeling, a sallow complexion, a yellow tinge of the whites of the eyes, a slow pulse very characteristic. The discharges from the bowels are often "clay colored," being deficient in the coloring matter of the bile; the urine darker colored than natural, containing as it does, an abnormal amount of the bilious coloring matter.

Many physicians believe that such cases are mostly due to a catarrhal inflammation of the stomach or duodenum (the upper intestine). It will be noticed

that some of the symptoms are the same as those which are present in chronic indigestion or dyspepsia; yet when the stools are light colored and the white of the eyes and skin slightly jaundiced, it would certainly appear that the bile does not follow its normal course; again, the biliousness disappears after the use of certain remedies that do not have so favorable an effect in pure and simple disorders of the stomach and duodenum.

The liver is the largest gland in the body, and plays an important rôle in the economy of the system, and it would seem entirely probable that it does sometimes become disordered in its action and leads to various disturbances. A little mistrust rests upon the term "liver complaint," for it is a kind of a scape-goat, that is, when a person is suffering from an obscure ailment, liver complaint is a convenient name for a physician to apply to it. It is probably true however, that the liver gets torpid or congested to a certain extent, and requires treatment.

In a well marked case of congestion or torpor of the liver, there is likely to be a sensation of weight and discomfort in the right side, and an aching feeling through the right shoulder. As the liver secretes the bile which is poured into the upper intestine, and takes a certain part in the intestinal digestion of food, it may be understood how it happens that in case the liver is torpid, digestion is imperfect.

There is another affection, namely, a catarrhal inflammation of the gall-ducts, which manifests symptoms

Sore Eyes in Children. From different, and sometimes unknown causes, children suffer from weakness and soreness of the eyes; the lids stick together in the morning. There may be considerable redness of the eyes and lids; a bright light seems to be hurtful and painful. Dirt which might have gotten into the eyes, or hairs from the eyelashes which have become turned inward upon the eyeball to irritate and inflame it, should be thought of as the possible cause of continued painful and sore eyes. In some cases there is more or less smarting and burning feelings, and the child is inclined to rub the eyes.

As regards treatment, it may be said that the application of cold water, in which a little powdered borax has been dissolved, is one of the very best remedies. A soft cloth can be wet in the solution and held upon the eyes by a bandage, allowing some of the water to get into the eye. If borax is not at hand, salt and water may be used in the same way; the amount that can be taken up on the end of a pocket-knife added to a cup of cold water. An excellent eye wash is made by adding to four ounces of rose-water, four grains of the sulphate of zinc (white vitriol.) See in another part of this book the treatment of sore and inflamed eyes.

A **Stye** is a minute boil which appears on the edge of the eyelids; it may be quite painful to the child and excite much swelling of the lid, so that the eye is closed. Excepting the pain and discomfort which they produce

they are rather innocent things and soon disappear. They should not be squeezed or troubled by attempting to open. If hot and painful, a cloth dipped in hot water may be applied to relieve the pain and inflammation.

Discharges from the Ears. Feeble and unhealthy children are subject to a running from the ears, which if not properly treated, continues a long time and has an offensive odor. Such discharge is sometimes thin, in other cases thick and mattery. There are more or less uneasy sensations in the ear and often earache. Such a trouble often arises from an inflammation of the ear-canal, and does not tend to produce deafness, and is not a real abscess in the ear. The trouble may be greatly benefitted by pouring into the ear, while the child lies on his side, a solution of powdered borax and warmish water, one half teaspoonful to a cup of water; after remaining two or three minutes turn it out and repeat several times a day. A weak solution of alum and water is also a very good remedy, used in the same way.

Earache in children is fully treated on page 196.

Toothache in children is fully treated on page 193.

Humors or Skin Diseases—Ailments rather more common in children than in adults—are fully treated of in this book, beginning on page 307.

the ends of the long bones, especially at the wrist and ankles, so that these joints appear larger than natural; this sign confirms the suspicion of rickets, which other symptoms seem to point to, and the proper treatment should begin at once. An infant manifesting these symptoms should receive prompt attention with the reasonable expectation that a cure would be made. The writer from his own experience would recommend two remedies, which in his hands, have been remarkably effective, namely: cod liver oil and phosphorus, which may be given in combination. An emulsion of cod liver oil and the syrup of hypophosphites makes an excellent mixture. The syrup of the lacto-phosphate of lime to a feeble child with deficient development of the bone is a medicine highly valued—dose, a teaspoonful three times a day to a child two years old. If there are suspicions that rickets is threatening the medicine should by all means be given.

Incontinence of Urine, (Bed Wetting) is not an uncommon habit of children from three to twelve or fifteen years of age, and may continue till the child is much older. The causes are numerous, and could not be well understood except by a physician. Many physicians think the habit is brought on by allowing children to drink too much water or milk in the latter part of the day, or by exposure to cold in the night, or lying on the back in the night—a posture which is unfavorable to retention of urine if the neck of the bladder is irritable,

as it is liable to be. In some cases the habit may be cured in its early stages without medicine, by great care of the child, by allowing but a small amount of drink in the afternoon, and by taking the child up in the night to empty the bladder, but, generally speaking, appropriate remedies are required to break up the habit, and in many instances the child's health must be improved before a cure can be effected.

The last case I treated was uncontrollable till the Elixir of Gentian and Iron, a tonic, was prescribed, after which the trouble ceased. In the majority of cases the trouble is due to constitutional weakness or to weakness of certain muscles, or to undue irritability.

Dr. Johnston, of Washington, says:—

“I have been using for many years the *fluid extract of ergot* in the treatment of incontinence of urine in infants and children; and I almost regard it as a specific for the disease. I give to an infant from one to three years old, 5 to 10 drops; and to a patient from three to ten years, 10 to 20 drops every three hours. Few children object to its taste, and it should be continued uninterruptedly for two or three weeks, and resumed if the disease should return, in which case the doses ought to be gradually increased.”

Another high authority prescribes the following for a child three years of age:—

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Tincture belladonna, two drams, fluid extract of rhus aromatica, two ounces, glycerine, two ounces, water sufficient to make four ounces. Mix. Dose.—One-half

to one teaspoonful three times a day; last dose at bedtime. Increase the dose according to age.

℞

Atropinæ sulph, two grains, aquæ dest. two ounces.
Mix. Dose—Give one drop for each year of age of the patient at 4 and 7 o'clock each evening.

Any good druggist will put up the above prescriptions. Avoid "sweets" and allow no fluids for a few hours before retiring; take the child up once after midnight to empty the bladder. The remedies should be given for several weeks, and the dose cautiously increased, if needed to have the desired effect. For ordinary cases there are no better remedies than these. Possibly a tonic may be required.

Falling of the Bowel, (Prolapse of the Anus.)
This painful accident may occur as a consequence of protracted diarrhœa, severe constipation and straining, or from great debility. It is quite easily recognized. The child is observed to suffer greatly after an operation of the bowels, and on examination a red tumor is discovered at the opening of the lower passage; it consists of folds of the rectum, or lower bowel, which have passed down below the sphincter muscle, and are so grasped by it that the pain continues till the protruded folds are put back into place. Reduction may be thus performed: smear the part with vaseline, sweet oil or lard, then with a piece of soft cloth gently press the folds back into the bowel, making sure the entire part is pressed within the constricting muscle. This is more

easily effected if the child lies belly down across the operator's lap.

If this cannot be done without producing too much pain, a cloth dipped in cold water or in hot water must be pressed upon the part till congestion is somewhat relieved, when another attempt must be made to reduce it. A pad may be needed to prevent the part from coming down again; this can be kept in place by binding it on by means of a strap, tied to one around the waist, or the child may be kept in bed for a few days.

Great care must be taken to prevent constipation, by giving some gentle laxative, thus preventing straining operations.

Night Terrors in Children. Dr. West, formerly the great English authority on the diseases of children, describes an attack as follows: "It happens sometimes that a child who has gone to bed apparently well and has slept soundly for a short time awakes suddenly in great terror and with a loud and piercing cry. The child will be found sitting up in its bed crying out as if in agony or fear, Oh dear! Oh dear! take it away! Father! Mother! while terror is depicted on its countenance and it does not recognize its parents, who alarmed by the shriek have come into the room, but seems wholly occupied with the fearful impression that has aroused it from sleep. By degrees consciousness returns."

There is no occasion for alarm from these seizures to which nervous children are subject; they are similar in

their nature to the nightmares of adults, free from danger to life. The attack may possibly return for several nights in succession, if the cause is not removed. Constipation of the bowels, over eating, or other disorders of the stomach, irritation from teething, intestinal worms and other causes may produce the trouble. To prevent a return all the known causes must be removed and the little patient's health and habits improved.

Sometimes a few doses of some laxative medicine is sufficient to a cure; in other cases, in which the stomach is overloaded, an emetic is the thing needed, afterwards, care that easily digested food in proper quantity is given.

A Rupture at the Navel is not infrequent in infants. It is known from the fact that when the child cries or coughs a little tumor is pressed out at the navel; complete healing had not taken place after the navel string came off. Usually the trouble is easily cured in this way: take a good bandage and sew up in it a silver half dollar; apply the bandage quite tightly around the body so that the silver piece will constantly press upon the rupture; by wearing this several weeks the infant is entirely cured.

Infants and young children are often ruptured in the groin. It is a fortunate thing that prompt treatment, as a rule, brings about a cure. A light, nicely fitting truss should be obtained, put on and worn till the hernial tumor entirely disappears, and even for sometime

thereafter, to prevent all danger of a return from a strain during violent efforts.

Inflammation of the Throat and Tonsils. Weak and scrofulous children are very apt to contract a slight cold and a sore throat from exposure, and after repeated attacks the tonsils remain in a condition of chronic enlargement, giving to the voice a peculiar tone. The mucous membrane of the throat is over sensitive and a slight exposure induces a sore throat. During the first attacks there is considerable fever, a throbbing pain in the throat and difficulty in swallowing. If the throat is examined, it is seen to be reddened and the tonsils more or less swollen; possibly there may be spots of a whitish color slightly resembling diphtheritic patches. The points of difference between these and true diphtheria patches are fully given under the subject diphtheria, which see.

Beginning in this way in older children, an abscess may form in the tonsil and after a time break, or the affection may disappear without an abscess. If chronic enlargement of the tonsils results, the child is apt to be deaf for a time.

In the treatment of the first attacks of this kind, if there is considerable fever and sore throat, two teaspoonfuls of the syrup of ipecac should be given, or enough to produce vomiting. Probably no treatment at first is so effective in aborting this affection. Children vomit without much difficulty. Flannels dipped in hot

water should be applied to the throat. Fifteen drops of the tincture of aconite should be added to half a tumblerful of water and a teaspoonful given every 20 minutes till the skin is moistened with perspiration. The patient ought to be kept in a warm bed. If old enough to gargle the throat, a weak solution of the chlorate of potash should be used for the purpose. Pounded ice may be allowed for the child to swallow, if the throat is much inflamed. It is well to give at first some laxative medicine.

Hoarseness due to Laryngitis. This affection is so common in childhood that it is worthy of mention. The larynx is that part of the wind-pipe in which the voice-forming apparatus is situated; if it is inflamed there is a change in the voice, or the voice may be entirely lost for a time. In its simple form, laryngitis is the result of a common cold, and is similar in its nature to a cold in the head (acute coryza,) or to bronchitis, which affections indeed often co-exist. Laryngitis is one of the principal causes of spasmodic and membranous croup. In simple laryngitis there is sometimes a dry harsh cough, but the breathing is usually natural, excepting a little hurried; in other cases nothing calls the attention to the affection, other than the hoarseness when the child cries or speaks. Even if the voice is entirely lost, mothers should not be alarmed for there is little or no danger in such a case, excepting that symptoms of croup appear. The child recovers from these

attacks in a week or more. The treatment may be the same as that recommended above for sore throat, which see.

Glandular Swellings of the Neck. It is not an uncommon thing for children, from some unhealthy condition of the system, to have one or more of the many glands about the neck greatly swollen. Physicians formerly were in the habit of calling all neck swellings and enlargements scrofulous, but it is only in exceptional cases that they are of this nature, because from exposure to cold and a sore throat such swellings are often noticed, disappearing in a few days. The writer has seen many cases in which these swellings came up without any well known cause, continued for several weeks, and then gradually disappeared; but it occasionally happens that they suppurate, that is, an abscess forms and breaks, and when healing has taken place a scar is left. It is good treatment in cases of these glandular swellings, at first, if there is not great inflammation, to paint them over with the tincture of iodine once or twice a day. Should there be considerable heat and redness, with a strong tendency to an abscess, a poultice should be applied till it breaks or is opened. If the child seems unhealthy and the swelling slow and indolent, the Compound Syrup of the Hypophosphites is an excellent medicine, and should be given—dose, a teaspoonful three times a day to a child five years old, a little more to an older child.

Sore Eyes in Children. From different, and sometimes unknown causes, children suffer from weakness and soreness of the eyes; the lids stick together in the morning. There may be considerable redness of the eyes and lids; a bright light seems to be hurtful and painful. Dirt which might have gotten into the eyes, or hairs from the eyelashes which have become turned inward upon the eyeball to irritate and inflame it, should be thought of as the possible cause of continued painful and sore eyes. In some cases there is more or less smarting and burning feelings, and the child is inclined to rub the eyes.

As regards treatment, it may be said that the application of cold water, in which a little powdered borax has been dissolved, is one of the very best remedies. A soft cloth can be wet in the solution and held upon the eyes by a bandage, allowing some of the water to get into the eye. If borax is not at hand, salt and water may be used in the same way; the amount that can be taken up on the end of a pocket-knife added to a cup of cold water. An excellent eye wash is made by adding to four ounces of rose-water, four grains of the sulphate of zinc (white vitriol.) See in another part of this book the treatment of sore and inflamed eyes.

A **Stye** is a minute boil which appears on the edge of the eyelids; it may be quite painful to the child and excite much swelling of the lid, so that the eye is closed. Excepting the pain and discomfort which they produce

they are rather innocent things and soon disappear. They should not be squeezed or troubled by attempting to open. If hot and painful, a cloth dipped in hot water may be applied to relieve the pain and inflammation.

Discharges from the Ears. Feeble and unhealthy children are subject to a running from the ears, which if not properly treated, continues a long time and has an offensive odor. Such discharge is sometimes thin, in other cases thick and mattery. There are more or less uneasy sensations in the ear and often earache. Such a trouble often arises from an inflammation of the ear-canal, and does not tend to produce deafness, and is not a real abscess in the ear. The trouble may be greatly benefitted by pouring into the ear, while the child lies on his side, a solution of powdered borax and warmish water, one half teaspoonful to a cup of water; after remaining two or three minutes turn it out and repeat several times a day. A weak solution of alum and water is also a very good remedy, used in the same way.

Earache in children is fully treated on page 196.

Toothache in children is fully treated on page 193.

Humors or Skin Diseases—Ailments rather more common in children than in adults—are fully treated of in this book, beginning on page 307.

Miscellaneous Subjects.

LIVER COMPLAINT AND BILIOUSNESS.

Perhaps no remark regarding the health is more frequently heard than this: "I am bilious, or I have the liver complaint. What are these affections and what are the symptoms which point to their real existence? A class of cases called bilious, manifest more or less of these phenomena: a poor appetite, a coated tongue, a bitter taste in the mouth, nausea and sometimes vomiting, usually constipation of the bowels, but possibly bilious diarrhœa, headache, giddiness, a feeling of languor and disinclination to physical or mental effort, and often great depression of spirits; and sometimes a dull and sleepy feeling, a sallow complexion, a yellow tinge of the whites of the eyes, a slow pulse very characteristic. The discharges from the bowels are often "clay colored," being deficient in the coloring matter of the bile; the urine darker colored than natural, containing as it does, an abnormal amount of the bilious coloring matter.

Many physicians believe that such cases are mostly due to a catarrhal inflammation of the stomach or duodenum (the upper intestine). It will be noticed

that some of the symptoms are the same as those which are present in chronic indigestion or dyspepsia; yet when the stools are light colored and the white of the eyes and skin slightly jaundiced, it would certainly appear that the bile does not follow its normal course; again, the biliousness disappears after the use of certain remedies that do not have so favorable an effect in pure and simple disorders of the stomach and duodenum.

The liver is the largest gland in the body, and plays an important rôle in the economy of the system, and it would seem entirely probable that it does sometimes become disordered in its action and leads to various disturbances. A little mistrust rests upon the term "liver complaint," for it is a kind of a scape-goat, that is, when a person is suffering from an obscure ailment, liver complaint is a convenient name for a physician to apply to it. It is probably true however, that the liver gets torpid or congested to a certain extent, and requires treatment.

In a well marked case of congestion or torpor of the liver, there is likely to be a sensation of weight and discomfort in the right side, and an aching feeling through the right shoulder. As the liver secretes the bile which is poured into the upper intestine, and takes a certain part in the intestinal digestion of food, it may be understood how it happens that in case the liver is torpid, digestion is imperfect.

There is another affection, namely, a catarrhal inflammation of the gall-ducts, which manifests symptoms

much like those of biliousness and liver disease. The liver and the bile may be in a healthy condition, but the swelling of the bile-passages prevent its out-flow; disturbances of the stomach and jaundice are apt to be the prominent symptoms. The inflammation, which is the exciting cause of this trouble, extends up from the duodenum (the upper intestine into which the bile-duct opens) so that inflammation of the duodenum is the primary disease. This should be thought of as the possible cause of symptoms like those of liver complaint.

Treatment of Biliousness. If a person continues for a time in ill health, having more or less of the above named symptoms, and no other known disease is present to account for them, it may be inferred that he is bilious. There are two other ailments for which it may be mistaken, namely, indigestion and lithæmia. Coming to treatment, it may be said that for simple, yet often satisfactory treatment, the so called saline laxatives, such as Epsom salts, Seidlitz powders, Rochelle salts, and the laxative mineral waters, such as Vichy, Bethesda, Apollinaris, drank in considerable quantities, may be tried. From the writer's own experience, and from the united testimony of most patients as well as physicians, it must be said that, in cases of real biliousness no remedy has such a marked, immediate and wonderfully good effect as a pill made of blue mass, three grains, taken at night and followed in the morning, before eating, by one or two Seidlitz powders or a drink of Epsom or Rochelle salts, sufficient to produce a free

operation. Such treatment is perfectly harmless and perfectly good. If the patient is not cured the dose may be repeated the third night.

Besides these remedies, the diluted Nitromuriatic Acid in about 10 drop doses, taken in sugared water three or four times a day, has usually an excellent and curative effect.

The following mixture is a bitter dose, but in many cases it is extremely beneficial in biliousness from torpor of the liver: The Chloride of Ammonia, 3 drachms; Fluid Extract Dandelion Root, $\frac{1}{2}$ ounce; Syrup of Ipecac, 1 ounce; Compound Decoction of Aloes, 2 ounces; Compound Syrup of Stillingia, 2 ounces; water to make 8 ounces. Mix. Dose: a teaspoonful in sweetened water 3 or 4 times a day.

To some persons pills are more agreeable, and may be taken for these bilious troubles. The standard Compound Cathartic pills which every druggist keeps, often effect a cure; take two at night, and if needed, two the second night. Get from the druggist the Compound Rhubarb pill and take 2 or 3 every other night.

The sarsaparilla mixtures, so often taken for biliousness, are in the opinion of the writer, very poorly adapted to such cases, and may be positively harmful. The patient may recover while taking the medicine. but he probably would do better without it.

In a real case of biliousness, tonics are not well borne; for instance, some preparations of iron, combined with the bitter tonics, have in many cases of anæmia

and debility a wonderfully good effect, while in biliousness they would be injurious.

Only light and easily digested foods, and in small quantities should be taken, avoiding all fatty foods.

Kidney Complaints. Patent medicines are very extensively advertised (and sold too) as "sure and safe cures" for these complaints. The people have been educated to regard nearly every urinary disorder as a kidney complaint; but as a matter of fact, the majority of the affections which receive this name, do not arise from a real disease of the kidneys—more commonly from some irritation or slight inflammation of the bladder; or from diseases of some adjacent organ, in oldish men from an enlargement of the prostate gland; or from some irritating, acid or ammoniacal condition of the urine. Again, some persons infer from a changed appearance of the water that they have a kidney disease—if the water deposits a brick dust sediment, or is very turbid and cloudy after cooling. Such unnatural appearances may possibly indicate a real disease of the kidneys, but more frequently they do not. Indigestion, a bilious disease, certain kinds of food or drinks, or disorders of some other organs of the body produce the abnormal condition.

Again, owing to an acid or irritating condition of the urine, a slight inflammation of the bladder, water passages or some disease of the rectum, and many other things, such as nervousness, there is often a desire to

pass water with unnatural frequency, sometimes attended with pain; the kidneys may be perfectly healthy.

Some of the most common chronic diseases of the kidneys are here briefly described, that persons proposing to take patent or other medicines for kidney disease, may have some basis for judging for themselves as to the nature of their complaints.

Bright's Disease. Briefly stated, chronic inflammation of the kidneys, which often results in chronic Bright's Disease, is variously produced—sudden or prolonged exposure to cold, which checks the healthy action of the skin and throws extra eliminating work upon the kidneys, produces congestion, which is the first stage of inflammation. Continued over eating of rich foods, indigestion and mal-assimilation throw an abnormal amount of work upon the kidneys which can be but imperfectly done—waste and poisonous materials of the body are largely eliminated by the kidneys, in some cases producing such an amount of irritation, that true inflammation ensues. Persons of intemperate habits, those who live in damp houses, and those poorly nourished, are more liable to the disease; it follows the acute form in some instances. It would be a bootless task to describe here the early symptoms of this disease; they are often insidious and uncertain; an examination of the urine, from time to time, for the presence of albumen and casts, is the only trustworthy means of settling the question as to the existence of Bright's disease.

Regarding treatment, it may be said that it would be foolish in the extreme to expect benefit from any of the many "safe kidney cures" advertised; drugs, known as yet, have little, if any, specific effect in curing the disease; they are often harmful. A good plan is, to drink freely every day of pure spring water (Poland Springs), to avoid stimulating foods and drinks, to take skimmed milk as a food and medicine, and to keep the skin in a healthy and active condition.

Diabetes. The passage of an unnaturally large quantity of light colored urine, and great thirst are the conspicuous symptoms of Diabetes. Two forms are recognized: first, *sugar diabetes*, second, *diabetes insipidus*, or *polyuria*. The two varieties differ considerably in their nature and gravity; the former is a chronic progressive affection, not well controlled by medicine and often, but not always fatal; the latter, diabetes insipidus, characterized by an excessive flow of water which does not contain sugar, is an ailment not so dangerous to life.

There has been much dispute regarding the real cause of *sugar diabetes*. At present the most popular theory is, that some faulty action of the liver is the principle factor or operating cause—that the kidneys are at first not diseased, but simply eliminate the sugar contained in the blood.

The patient's attention is first called to the fact that he is obliged to pass water much more frequently than usual, and that the amount is large, clear and pale, and that he is thirsty. If a little urine is placed in a shallow

dish the watery part evaporates, leaving a sticky sediment which contains sugar.

The other variety, *diabetes insipidus*, as stated above, manifests symptoms at first very much like those of true diabetes, excepting that no sugar (in rare cases a little), is contained in the urine. The cause of this latter ailment is obscure. It follows in some cases disease or injury of the nervous system, for instance, sunstroke, a blow or fall upon the head, or exposure to the sun's rays. Intemperance seems to be the only assignable cause in some instances.

The duration of *diabetes insipidus* is very uncertain; in some cases several years, in some it terminates fatally. The affection is rather unmanageable, that is, not easily cured or well controlled by medicines.

There is another important disease of the kidneys, not very uncommon, namely: a *Calculous disease*, in which concretions collect in the kidneys from urinary sediments; these are called calculi, stones or gravel, if of small size. The presence of these foreign substances in the kidneys incites more or less inflammation and sometimes an aching pain in the back until they pass out.

There is often a severe aching pain in the back when a stone of some size moves about in the kidney, but the most severe paroxysms of pain are caused by the passages of a rough stone of considerable size down through a small tube (the ureter) leading to the bladder; these attacks of pain get the name nephritic, or kidney colic. Besides, the presence of these concretions

often produces (sometimes it does not) an inflammation of the lining membranes of the kidneys: there is an aching pain in the back, chilly sensations, more or less fever, the urine is passed too often, and on cooling throws down a large amount of sediment composed of mucus or pus, possibly containing blood. The affection may run a protracted course and one of the kidneys be destroyed; more commonly convalescence takes place after a time.

Such, briefly described, are the principle organic kidney diseases. But as referred to above, simple urinary functional disorders are vastly more common. Of all such affections, nothing is more common than chronic inflammation, or irritation of the bladder, as it complicates many other diseases and often exists independently. Such a trouble is often called "irritable bladder." The causes are very numerous, some of which have been referred to above. The subject is too extensive to allow of a full discussion here. It may be said that it requires considerable scientific knowledge and experience in the diagnoses and treatment of this class of diseases, to be able to select at once the proper remedy. The less patent medicine taken the better.

For a simple, yet often effective medicine in nearly all cases in which there is an irritation or an inflammation of the urinary organs, buchu leaves, barberry leaves, couch grass root, etc., steeped in water and freely drank, are often prescribed by physicians. If the urine is acid, the effect is better if a little bi-carbonate of soda is add-

ed. Copious drinks of this kind render the urine bland and less irritating, and allay inflammation.

In oldish people with a scanty flow of water, sweet spirits of nitre, one half teaspoonful several times a day, is very beneficial.

An excellent remedy is the following mixture: Carbonate of lithium, one-half ounce, fluid extract henbane, one ounce, fluid extract couch grass root, one ounce, compound tincture of cardamon, two ounces, simple syrup, one and one-half ounce. Mix, and take a teaspoonful in a little water, three or four times a day.

If there is very much irritability, take 60 grains of bi-carbonate of soda and 40 grains of Dover's powders, mix and divide into twenty powders, and take one powder four times a day.

There are acute ailments of this kind in which the symptoms are nearly the same, but very urgent and distressing. For such attacks a Sitz-bath of water as hot as can be well borne works remarkably well. This may be followed by cold packs over the region of the kidneys.

Heart Complaints. Disturbances in the healthy and normal action of the heart, and sensations, either of pain or discomfort in the region of the heart, are so common and so often lead to anxiety regarding the health, and a painful suspicion in the mind of the patient that organic disease of the heart is imminent, that the subject is interesting.

In the first place, it may be said that organic heart diseases are mostly owing to the wear and tear and the degenerative changes incident to advanced age, so that the young and the middle aged are, broadly speaking, exempt, though the disease may be congenital, and is often a sequence of rheumatism. In the middle aged, functional diseases of the heart are very common, and arise from a great many and varied causes.

By the term "functional disease" is meant a disorder in the office of an organ—not a structural organic change. But it should be understood that if the heart is diseased in structure, it will also manifest symptoms of functional disease, that is, as a rule. The causes of functional ailments, barring unusual cases, is summarized thus :

(1). A changed or unhealthy condition of the blood as to quality or quantity. (2). Nervous influences, or faulty innervation. (3). Irritation reflected from other diseased organs (sympathetic).

1. The healthy action of the heart is dependent upon its blood supply. If the patient is anæmic, that is, if the blood is poor in quality, being deficient in some of its normal elements, the action of the heart may be weak and irregular, as shown by a feeble and irregular pulse, and other well marked symptoms. Women are much more commonly subject to disordered action of the heart from this cause. Considerable hemorrhage or loss of blood from any cause, is apt to be followed by weakness or palpitation of the heart. On the other

hand the plethoric, in whom the blood is rich in fibrin and red blood-globules, suffer from over stimulation of the heart, and consequent palpitation. In brief, it may be said that there are a great many causes acting through the blood, which produce abnormal action and sensations about the heart.

2. In most cases of physical exhaustion, hysteria, hypochondriasis and in very many other conditions of ill health, the nervous system suffers more or less, and it is often shown by disturbed action of the heart, such as palpitation, irregular action, pain or discomfort about the heart. This class of cases is called by some physicians "nervous disorders of the heart."

3. Distressing palpitation and other irregularities of the heart, are very often produced by indigestion, or dyspepsia, worms in the intestinal canal, constipation of the bowels, disease of the lungs, and various other causes reflex in their nature. Some of the most obstinate cases of palpitation of the heart the writer has ever seen, were owing to indigestion. Cases of chronic indigestion complicated by great irregularity of the heart, often produce great mental depression and anxiety regarding the health. Palpitation may be the result of over eating when the digestive and assimilative powers are good; too much rich blood is made. The intemperate use of tobacco, and drinking strong coffee or tea are some times causes of disorders of the heart. These attacks come in paroxysms of greater or less severity and variable duration. Palpitation of the heart

is not always complained of, but it usually is. If the heart's impulse is weak from any cause, the pulse stroke will be weak, and is usually much more rapid than natural, and may be irregular. A feeling of incapacity for physical and mental exertion exists; there are cold extremities, pallor of the face and a sensation of faintness and distress about the heart; despondency and a fear of dying is present in some instances. Dimness of vision, flashes of light, or other disturbances of the sight, the want of breath and cold shiverings are sometimes present. Besides palpitation, which means an abnormally rapid and strong impulse of the heart, various other altered actions may be the prominent features; for instance, the heart may seem without apparent cause, to have a single strong impulse, as patients often express it, the heart seems to "turn over," which of course cannot happen. Again, there may be great irregularity in the force and frequency of successive beats, so that it is difficult to count the pulse; when the ear is placed over the heart to listen to its sounds, there seems to be, and there is, a tumultuous action of the heart. One of the most trustworthy signs of organic disease of the heart is what is called a *murmur*, which means an unnatural, or added heart sound; a murmur is sometimes heard in a functional disease of the heart.

From this brief account it may be learned that great disorder, and even pain and strange sensations about the heart, do not always indicate organic disease.

MEDICAL TERMS DEFINED.

We explain a few of the more difficult medical words, that they may not be "all Greek" when they are heard in the learned talk of doctors, or when seen in print. Many of these words cannot be found in Webster's Unabridged Dictionary.

ABSCCESS: a collection of pus or purulent matter in any part of the body.

ACUTE DISEASE: one more or less violent, and of short duration.

ANÆMIA, *a-nē-me-a*: deficiency of the blood in quantity and quality, especially in red globules; poor blood.

ANÆSTHETICS, *an-es-thet-ics*: such medicines as chloroform, ether, nitrous oxide gas, which destroy sensibility to pain.

ANODYNE, *an'o-dīne*: a medicine which allays pain.

ANTHELMINTICS, *an-thel-min'tics*: destroyers of intestinal worms.

ANTISEPTIC, *an-ti-sep'tic*: preventing putrefaction.

APHTHA, *ap'tha*: ulcers or canker in the mouth.

APNŒA, *ap-nē'a*: without breath; difficult or impossible breathing.

APOPLEXY, *ap'o-plex-y*: a stroke of palsy, often called a shock.

ASCITES, *a-sī'tēs*: dropsy of the abdominal cavity.

ASPHYXIA, *as-flī'e-a*: without pulse; suspended animation from strangulation, etc.

ASTHENIA, *as-thē'ne-a*: loss of strength.

ATONIC: wanting natural strength.

AUTOPSY, *au'top-sy*: a post mortem or after death examination of the body.

BACILLUS, *ba-cil'us*: one kind of bacteria.

BACTERIA, *bac-tē'ria*: microscopic germs; microbes.

BRONCHIAL TUBES: those which lead to and through every part of the lungs.

BRONCHITIS, *brōnk-i'tis*: inflammation. of the bronchial tubes.

CEREBRO-SPINAL: referring to the brain and spine.

CHLOROSIS: a disease peculiar to young females, attended with great pallor of the skin; green-sickness.

COLON: the large intestine.

COMA, *cō'ma*: deep stupor or lethargy.

COMATOSE, *com'a-tose*: in a state of coma.

CONGENITAL: born with, existing at birth.

CONGESTION: unnatural supply of blood in a part.

CONVALESCENT: improving in health.

CORYZA, *co-ry'za*: a cold in the head; a watery discharge.

CUTANEOUS: pertaining to the skin.

DIAGNOSIS, *dī-ag-nō'sis*: the art of knowing or discriminating the disease and the result obtained.

DIAPHORETIC, *dī-af-o-ret'ic*: a medicine which produces sweating.

DIURETICS, *dī-u-ret'ics*: medicines which increase the urinary secretion.

DYSPNŒA, *disp-nē'a*: difficult breathing.

ECZEMA, *ec'ze-ma*: a very common skin disease; salt rheum is of this nature; catarrh of the skin.

ENDEMIC, *en-dem'ic*: prevailing in particular localities.

ENTERIC FEVER: typhoid fever.

EPIDEMIC: prevailing among people.

EPIDERMIS: the external skin, the cuticle. It is this which is raised in a blister.

EPISTAXIS, *ep-is-tax'is*: nosebleed.

EPIZOOTIC, *ep-i-zo-ot'ic*: a contagious disease prevailing among cattle and horses.

ETIOLOGY, *e-ti-ol'o-gy*: the science of the causes of disease.

EXPECTORANTS: medicines which facilitate raising mucus or phlegm from the bronchial tubes.

FAUCES, *faw'cēs*: the throat.

FEBRILE, *feb'rīle*: belonging to fever.

FERRUM: iron.

FISTULA: a pipe sore.

FLATULENCE: a collection of wind or gas in the bowels or stomach.

FOMITES, *fom'i-tēs*: a term applied to goods, clothing, etc., imbued with contagion.

FUNCTIONAL DISEASE is one in which the action of an organ is vitiated, but its structure not changed; examples, dyspepsia and constipation.

GASTRALGIA: pain in the stomach.

GASTRIC: pertaining to the stomach.

GASTRITIS: inflammation of the lining of the stomach; sometimes gastric fever.

GERM THEORY OF DISEASE: the doctrine that teaches that diseases are caused by minute, microscopic germs, called bacteria, which are on the border line between animals and plants.

GERMICIDE: anything that destroys germs.

HEMIPLEGIA, *hem-i-plē'gi-a*: paralysis of one side of the body.

HEMOPTYSIS, *hem-op'ti-sis*: bleeding from the lungs, spitting blood.

HEMORRHAGE, *hem'or-age*: loss of blood: bleeding.

HEMORRHOIDS, *hem'or-oids*: the piles.

HYGIENE, *hi'gi-ēne*: the science and art of preserving health.

HYPERÆMIA, *hi-per-ē'mi-a*: an over supply of blood in a part or organ.

HYPNOTIC: having power to produce sleep.

HYPODERMIC, *hi-po-der'mic*: under the skin. In late years, medicines are often injected under the skin by the use of a hypodermic syringe.

IDIOSYNCRASY, *id-i-o-syn'cra-sy*: a peculiarity about an individual's constitution or temperament.

INFLUENZA (epidemic): la grippe.

INSOMNIA: wakefulness or inability to sleep.

LARYNGITIS, *lar-in-gi-tis*: inflammation of the larynx.

LARYNX, *lar'inx*: the upper part of the windpipe.

LESION, *le-zhūn*: an injury or a diseased change of a part.

MASSAGE, *ma'sazh'*: the art of treating diseases by rubbing, kneading, and exercising the muscles, joints, etc.

MATERIA MEDICA: a collective term comprising all substances or medicines used in the treatment of diseases.

MENINGES: the membranes (three) which surround the brain and spinal cord.

MENINGITIS, *men-in-gi'tis*: inflammation of the meninges.

MICROBE: a germ.

MICROCOCCHI, *mic-ro-coc'si*: minute creatures found in the sediment of water, supposed by some to be the same as bacteria.

NARCOTICS: medicines which tend to produce sleep or stupor.

OBSTETRICS, *ob-stet'rics*: the science of midwifery, or assistance at childbirth.

ŒDEMA, *e-de'ma*: dropsy under the skin.

ORGANIC DISEASES: those in which there is a real change in the substance or structure of an organ; opposed to functional diseases in this respect.

PATHOLOGY: the knowledge or theory of disease.

PERITONITIS: inflammation of the sac (peritoneum) of the bowels.

PHARINGITIS, *far-in-gi'tis*: inflammation of the pharynx.

PHARYNX, *far'inx*: the back part of the throat.

PHTHISIS, *ti'sis*: consumption of the lungs.

PLEURA; a membrane lining the chest.

PLEURISY: inflammation of the pleura.

PROGNOSIS, *prog-no'sis*: a forecasting of the probable course and result of the disease.

PTOMAINES, *to'mānes*: poisonous substances resulting from putrefaction.

PULMONARY: referring to the lungs.

PUS: the creamy matter found in abscesses.

PUSTULE: A pimple containing pus.

PYÆMIA: *pie'mi-a*: pus in the blood, blood poisoning.

QUINSY: acute inflammation of the tonsil ending in an abscess.

RABIES, *ra'bi-ēs*: the same as madness in the dog or other animal.

RECTUM: the lower bowel.

SANITARY: promoting health.

SEDATIVES: medicines which have a soothing effect.

SEPTIC: causing putrefaction.

SEPTICÆMIA, *sep-ti-se'mia*: blood poisoning.

SERUM: watery part of the blood.

SUPPURATION: the formation of pus or matter.

THERAPEUTICS: that branch of medicine which treats of the use of medicine to cure diseases.

TONICS: medicines which give strength or tone to the system.

TONSILLITIS: inflammation of the tonsils.

TUBERCULOSIS: the formation of tubercles.

VERTIGO: dizziness.

VESICLE, *ves'i-cle*: a small water blister on the skin.

VIRUS, *vi'rus*: poisonous matter produced by disease and capable of propagating disease; vaccine matter.

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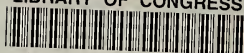
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